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OPEN OPERATION IN FRACTURES OF THE SHAFT OF THE FEMUR.*

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A discussion of open operation is not free from contention. This contentious attitude, on the part of most physicians, is based upon two principle factors: (1) The danger of infection, and (2) the recipiency of traumatism by the bony fragments from the methods of internal fixation. These points are well founded. Thoroughly appreciating these undesirable possibilities I do not attempt to justify open reduction as a routine procedure, but to say that open operation is never to be resorted to would be an injustice to many of our patients. In certain cases when firm union, proper approximation of fragments and correct alignment are at hazard because of the inadequacy of the more conservative procedures, our obligation to the patient leaves us but one choice. The success of this like that of the more conservative methods, depends upon the skill and good judgment of the individual surgeon.

Let us take thoroughly into account the condition with which we are confronted. We do not have here the liklihood of undisturbed healing as that of a clear-cut wound elsewhere because we are dealing not only with a fractured bone but with severely traumatized tissue, with hematomata and wound pockets, a condition aggravated by the projecting spicules of the bones, which was torn at the injury. Discretion must be exercised in the selection of the time of operation so that we go in when the reparative process is active. Strict asepsis must be carried out in the most rigid manner. With the time of operation judiciously selected and with efficient asepsis infection is the rare exception rather than the rule. And should even a small portion of the infections so commonly mentioned really follow open reduction the beacon light of Lister has served us naught, and we stand groping in the darkness, hopelessly succumbed to the super-intelligence of bacteria, and leading our patients into the death trap of the hospital stinch of the pre-Listerian epoch.

*Read before the Mississippi State Medical Association, Meridian, Miss., May 8-10, 1928.

ROLE OF THE PERIOSTEUM

The prime factor in the consideration of any operation for the fixation of bone fragments is its influence upon osteogenesis. The exact mechanism in the regeneration of bone is still largely a matter of speculation and controversy. From the recent work of Leriche and Policard of France it would appear that the periosteum has no true osteo-genetic action, but instead, under normal conditions prevents the formation of bone. Periosteum, their studies seem to show, together with all fasciculated structures as muscle fibers and connective tissue bundles, prevents the wide-spread osseous infiltration and tends to direct the osseous trabeculae in a parallel rather than a perpendicular direction. Similarly, the conclusion of McWilliams after a thorough study

of the methods of bone grafting were that the presence of the periosteum upon a graft had but little influence upon its ultimate success.

AS TO THE BLOOD SUPPLY OF BONE

The work of R. W. Johnson, Jr., of John Hopkins, gives us a beautiful conception of the physiology of the blood supply of the shaft of long bones. I quote an abstract of his findings: "He finds that the nutrient vessels maintain viability throughout the medulla and supply the inner half of the cortex. Repair is active when the nutrient vessels alone are intact. The metaphyseal vessels maintain viability throughout the medulla and inner half of the cortex, but repair is not as active as in the controls except close to the metaphyseal ends, being notably delayed in the middle of the shaft. The periosteal system does not normally supply more than the outer half of the cortex and is unable to afford an effectual collateral supply to the medulla of the diaphysis under four weeks time. The periosteal repair is relatively poor in the healing of cortical defects. Regarding the shaft as a whole the nutrient vessels are the most important, metaphyseals next, and periosteal system least."

GENERAL CONSIDERATIONS

In our work we have employed most of the standard procedures in an effort to obtain the best possible fixation of fragments with a minimum of bone damage. And it appears to me that most procedures offer one advantage at the expense of the other. In determining a satisfactory procedure we must bear in mind that in bone we are dealing with a living tissue, and a tissue with a relatively scant blood supply. To assure a condition most favorable to osteogenesis that blood supply must be interfered with to a minimum degree and traumatism by drill holes, incision and by saw and chisel, and the introduction into the bone of foreign material, whether absorbable or non-absorbable should likewise be reduced to a minimum.

SOME METHODS COMMONLY EMPLOYED

In discussing briefly some of the commonly employed procedures I shall deal only with simple fractures in adult limbs.

Ivory pegs, beef bone pegs and other types of intramedullary grafts allow adequate fixation with a minimum of traumatism to the cortex of the bone. In many cases this procedure is difficult of application, and in addition I have always felt apprehensive as to its use because of the interference of the nutrient or diaphyseal systems of circulation, both of which traverse the medullary canal.

The autogenous bone graft naturally deserves the place of honor as the ideal material for the internal splints. However, with the small graft, as the inlay type, fixation is not absolute, the necessariness of incisions and drill holes introduces bone trauma to some degree, and in the postoperative application of the cast the graft might be broken. With the massive graft fixation becomes more secure, but with it traumatism becomes a more prominent factor, as the incision must be made deeper into the bone and there is greater sacrifice of its substance.

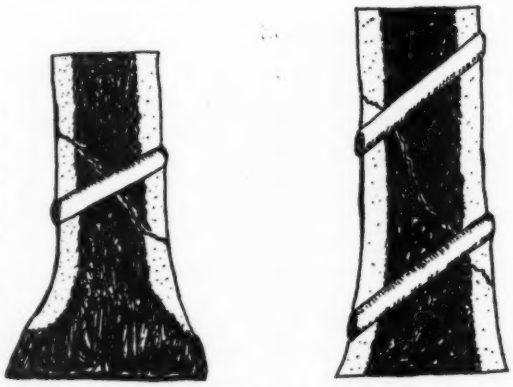

Fig. 1: Diagram showing manner of fixation of oblique bone peg in oblique fracture, illustrating the advantage of two pegs over one.

In oblique fractures the bone peg placed obliquely through the bone so that the extremities anchor the proximal and distal fragments respectively, meets our require-

ments satisfactorily. Unfortunately, however, it is applicable in but a limited number of cases. Since this graft accomplishes its fixation only by the contact of its extremities with the cortex of the bone fragments we have found it more satisfactory to use two pegs, one placed at either extremity of the fracture. A square peg in a round hole seems to hold more securely.

In our hands the Lane plate has provided the most secure fixation of transverse fractures. When a small drill is used so that the screws fit very tightly it is quite rare that the plate loosens and has to be removed. However, the introduction of foreign non-absorbable material into the bone substance is not a point to be desired as rarefying osteitis does at times occur with subsequent loosening. This is the one great defect of methods involving the use of screws or wires traversing the cancellous tissue.

To my way of thinking the use of circular wires and metal bands provides the procedure of choice. With them, unfortunately, we are dealing with non-absorbable material, but there is no drilling nor cutting into the bone, there is no interference with the circulation and no foreign material traverses the bony substance. Consequently rarefying osteitis does not occur and traumatism is reduced to the minimum. But their application, too, is limited.

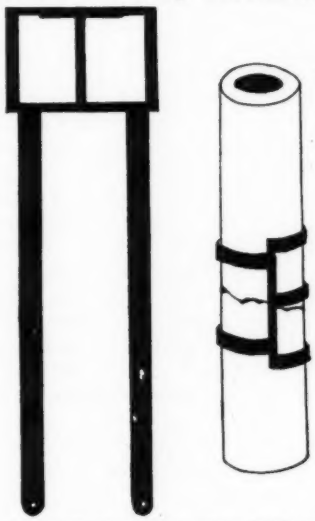

Fig. 2: The author's German silver band, and showing its applicability in transverse fractures of long bones.

Realizing the advantage of double wires and double bands in these oblique and spiral fractures, I devised a metal internal splint to which were attached two bands for the fixation of transverse as well as oblique and spiral fractures.

This is a modification of the Collin's band and is made of German silver. The rectangular bar has been made longer with a cross piece in the middle to prevent bending. On one side extending from the rectangular bar are two bands instead of one, the bands being placed at each corner rather than the middle, as in the Collin's

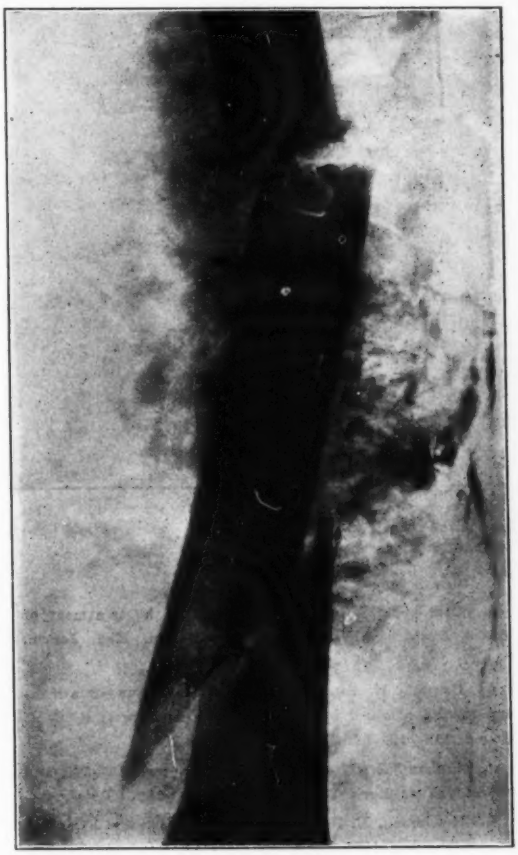

Fig. 3: Fracture of femur 8 weeks after injury showing malposition and delayed union.

band. This allows more stable fixation of spiral and oblique fractures than the Parham-Martin or Collin's band, and with it transverse fractures can be held with facility as it combines the advantages of the Lane plates and the circular band.

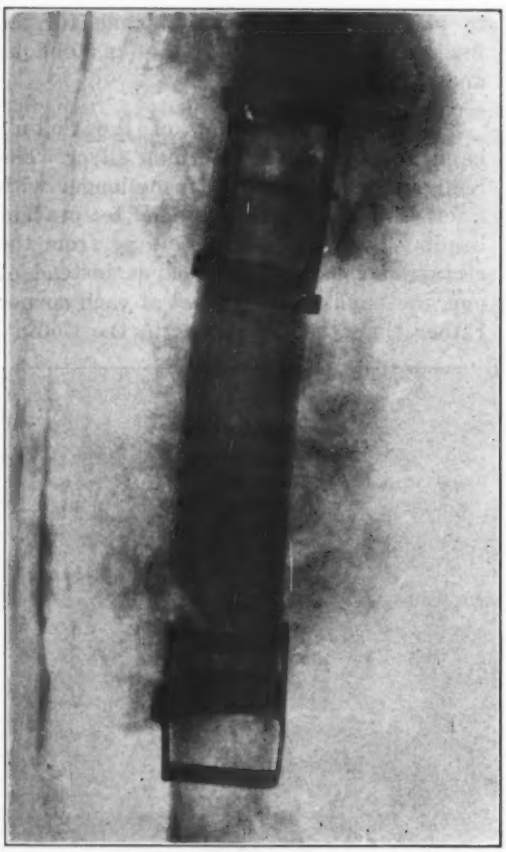

Fig. 4: Same case as Fig. 3 after open reduction. Collin's band has been applied to spiral fracture and the author's band to the transverse.

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DISCUSSION.

Dr. J. S. Ullman (Natchez): Gentlemen, this is not only an interesting paper, but a very admirable paper. Dr. Rush has brought out some very good points. It reminds us of a fact that so many of us are prone to overlook in doing bone work, and that is the mechanics involved in the individual case. Lane pointed out some years ago that most of the failures in the use of his plates were due first to careless technique or sepsis; in other words to infection, and secondly, to a failure to appreciate the mechanics involved. Where you have a fracture, he stated that many men were putting on a plate with one screw on either side, and instead of making a splint they were making a hinge. Naturally you have early pulling out, or loosening up of your screw.

I had the pleasure of hearing Dr. Johnson's paper at Memphis before the Southern Medical last fall. It was an admirable one as Dr. Rush has said, and I am sure all of us are convinced that we must respect the blood supply and there are cases in which arises the question of using mechanical means, non-absorbable splints internally—the question of conserving the blood supply. I had quite a little bit of experience over seas in bone work, and I found that if you give a completely detached fragment—that is a fragment that was completely separated from all other bone—if there was no blood supply, some fragments too that were separated from soft tissues, a great many of them would be viable. Dr. Rush did not tell us just how long his apparatus is. It is going to be necessary, if we are going to get good fixation, to have these bands to separate the rigid portion and the portion that is far enough back from the point of fracture to give an efficient mechanical support. There are times, of course, when we have to resort to some form of plate, or other means of fixation, but personally I am—of course there is a personal equation again—I am a little too timid about introducing foreign material and non-absorbable splints, and in my own work I have tried to get along without resorting to an open operation. As Dr. Rush says though there are times when you have to do it in order to maintain it. It is a question though whether it might not be wiser to resort first to the use of skeleton traction pins, or something of that sort with a properly fitting co-application splint and a good plaster afterwards.

Another thing about the use of pegs that occurs to me here. Of course good men are using the

square peg in the round hole. That has come about because it is hard to get a bone peg with a round cross section fit squarely in the round hole. You can drive a square peg in and get four good points of contact, but I think we could get another lesson from the machine shop, or from the automobile manufacturer, and remember that when he wants a tie back or pin to stay put, he puts a tapered pin in place. Any of you who have ever tinkered with your own automobile, and have tried to remove a tapered pin, know that it takes a great deal of effort, and all you need is a pin with a slender taper put in the hole. If we are going to devise such a thing, it will mean accurate apparatus, but I believe that will be the sclution of the problem. I thank you.

Dr. Isidore Cohn (New Orleans): I think one thing, in expressing my words of appreciation of Dr. Rush's paper, is that he has failed to remember that it is the man behind the apparatus, and not the apparatus. Dr. Rush has shown us his own versatility by the various types of operative and conservative means which he has supplied, but he fails to tell us that it is Dr. Rush and not this particular band that he is using. A good many people in applying Dr. Rush's band would get it just a little bit too close to the ends, and it would not work.

In regard to the application of fixative apparatus—general fixation, etc., I want to say in the beginning that I believe that a great many more cases, if we would apply conservative anatomic principles from the beginning, that we would have to resort to operative procedure very much less than we do. More than that we would sustain a traction where our plastic fixation does not work so well, while if we will apply some of the mechanical principles externally that we apply internally, we will get good results. For instance, if there is a displacement—one fragment up above and one below—and we are worried about how we are going to get that back in place—whether we use the Collins band for traction, or whether we use adhesive makes little difference, and if this antero-posterior displacement is not restored, we can have a modified Pearson attachment applied above and one below, and gradual pressure with screws will make those fragments come into position very nicely. This can be applied to almost any strength we like. I believe in most instances the average one of us had better keep our hands off. In the hands of a man who is absolutely satisfied with his own skill, and who has a good working team as Dr. Rush must have, why he is going to get good results.

In regard to the inter-medullary peg Dr. Rush very properly paid his respects to it by saying that whatever type you apply is going to interfere with your osteogenetic bone development, and the two basic sources of osteogenesis are the periosteum and the eposteum. I believe that the periosteum is a natural splint and source of bone supply and it prevents infection if not tampered with too much. It is not a source of bone regeneration we believe, but the eposteum is.

But your intramedullary splint if applied tight enough will interfere with circulation, and therefore interfere with your intra-osteal development of the bone. There are many cases where that fixation will stay there long enough to get good results, but in a majority of instances I believe intramedullary graft should not be used.

Dr. John C. Culley (Oxford): I feel a hesitancy in following such men as Dr. Ullman and Dr. Cohn, in discussing this paper, but I believe we have a very timely subject for discussion. The adoption of the hard surfaced roads, the enormous increase of automobile accidents with the lumber industry in Mississippi, as it is growing daily, we are continually seeing more and more fractures of the femur. There is quite a number of points which time will not permit, but Dr. Rush did not mention the type of anesthesia, and I want to leave this one word for the Association to study thoroughly. I am advocating something which has not been used very much in the past, and that is spinal anesthesia. Under ether anesthesia, without the use of the Hawley table, it is almost impossible to get anesthesia. I am going on record as making this statement, that all those cases in which you are going to have shortening unless you do operate, I believe in operating. Why can't we operate on the femur under the same conditions as we can go into the abdomen? As far as the splint to be used, as Dr. Cohn says, let that be left to the operator. I am going to use the Lane band whether it is a spiral or an oblique fracture. I see no reason for using a splint on a transverse fracture. If you get a transverse fracture you are not going to have any trouble with that fracture getting out of line, if you have the proper splint. The most important point is the after treatment. Ask yourself "is the patient a young man? Is he a syphilitic, or is he a diabetic? What about his nourishment afterwards? Is he young or old? If you will permit me, I want to give you just one illustration. A man 76 years old was brought to me with an upright fracture of the femur. That patient's financial condition must be considered. Has he the money to lay in the hospital from 4 to 5 or 6 weeks, with an extension? Is that man going to have shortening unless you do use traction, or unless you do an open operation? Under spinal anesthesia that old

gentleman lay up there and talked to me during the operation, said he didn't believe I was doing anything to his leg. The spinal anesthesia gives relaxation of all muscles. You are not going to need any traction; if you have a Hawley table, you are simply going to have to use just enough tension to close the break. In five days time, that old gentleman was taken to his home; he is now sitting up in a chair enjoying good food and was not put to the expense of a big hospital bill. The wound has healed perfectly, and he is feeling fine, and by carefully watching his diet, and watching his kidneys—do this with all patients, and you are going to get much better results. It is important to watch the kidneys because in this day and time we are finding more diabetics every day.

Dr. M. Ewing (Amory): Formerly I used a whole lot of fixation on fractured shafts of the femur. I used the Hawley table, when I put them up, roentgen-ray pictures afterwards showed every callous, and I got to considering how many times patients are debilitated for many years with an artificial leg before they got used to that leg, and I regard some of these internal fixations as harmful. Those who have fracture service and well equipped traction apparatus very seldom have to use open operation. I rarely use it. I have a single case that I know of, of non-union. I believe every man should use his own details, but I do think if bad advice to give a general body of surgeons or practitioners that you should use internal fixation. Dr. Rush did not say that—he said now and then you get a union where you have to use it. Dr. Culley is a little stronger than that—he is using open operation. If Dr. Culley, is adept at it, it is the proper thing for Dr. Culley but I don't believe that most of us are, and in the majority of cases, it is my opinion that if you use the Hodges splint and Lane band or whatever apparatus is known to have the proper anatomical adjustment, you will get results, and like Dr. Cohn said, if we use the same amount of intelligence and the same amount of care and anatomic knowledge with skeleton traction, we will get results.

Now just one more thing—I heard Dr. Campbell once say, "did you ever see a dog with a non-united leg from a fracture?" They all unite. Why? Because there is always use of it with a certain amount of motion. Absolute fixation without motion will result in very little callous and frequently in non-union. Skeleton traction does not completely mobilize, and I noticed in Dr. Rush's pictures here of these internal fixation points, how little callous was shown. The next thing is how long it takes that callous to form. Every now and then you take a young person, and they get a healing in almost two or three weeks, but an older person does not, and frequently there are from six to eighteen weeks and longer before sufficient callous is there to absolutely hold it.

Dr. J. H. Rush (closing): I thank you gentlemen for discussing my paper. I enjoyed the discussion very much. The only thing I would like to mention is a point that Dr. Culley brought out, that there is many a time when your external splint is a bad choice but there is a financial consideration that has to be taken into account, as where you have charity hospitals, or where you have contract practice, and someone else pays the bill, you can afford to keep him in the hospital and apply these tractions as they ought to be, but there are very few people who can afford to lie in a hospital for six weeks with a traction. In a case of that kind we have to resort to internal fixation in order to get the patient out, when you would use external traction otherwise. I thank you very much.

BODY CHEMISTRY IN ITS RELATION TO SURGERY.*

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In the past decade rapid strides have been made in the perfection and simplification of technic in making blood chemical examinations so that even the smaller laboratories are now equipped to do the routine examinations considered necessary by the clinician.

The addition of this valuable adjunct to surgery has made it necessary for the surgeon to familiarize himself with the subject to the extent that he can properly evaluate the information which it affords, but with this information at hand he has a means of determining more accurately than ever before the true physical condition of his patient.

The brief time alloted here does not permit a general discussion of body chemistry and I shall confine my remarks to only a few of the more important phases of the subject which relate to conditions most frequently seen in daily practice; namely,

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renal conditions, acidosis, alkalosis and shock.

Renal impairment due to foci of infection, over-eating, alcoholism, and the like, is a frequent complication in patients seeking relief for some surgical ailment and the exact nature and extent of this impairment is tremendously important, and to a large extent influences our choice of operation, time of operation, anesthetic and prognosis. Careful physical examination and urinalysis do not always reveal the presence of renal impairment. Not infrequently a patient with negative urine and a negative physical examination is operated quite successfully from a technical standpoint, and yet the patient dies in a few days from an acute nephritis. These cases are sometimes regarded as accidents, but there is a rapidly accumulating mass of data that tends to prove that these cases had definite renal impairment before operation. A recent observer reports a case which well illustrates this point. The patient, a white male, aged 37 years, with a urine negative, both chemically and microscopically, showed a total non-protein nitrogen of 200 mg per 100 cc of blood, urea nitrogen 125 mg., and creatinin 6 mg. This represents a retention to the extent of nearly six times the normal amount of total non-protein nitrogen eight times the normal amount of urea nitrogen, and over three times the normal amount of creatinin. With this marked renal impairment it is doubtful whether the patient could have survived a severe surgical operation.

In addition to blood chemical examination for retention products, renal function tests offer a simpler and fairly accurate method of determining kidney function. A great number of these tests have been suggested, but the phenolsulphonpthalein test suggested by Rowntree and Geraghty is the one most often used since it requires very little equipment and is simple in its application. A good out-put from this test denotes good kidney function, but a poor output does not always denote extremely bad function. One example of this type of case is exemplified in obstructions low down in the genito-urinary tract where there is a minimal output of dye and an almost normal blood urea. Usually in this type of case the dye output comes back to normal when the obstruction is relieved.

In spite of the remarks made elsewhere in this paper with reference to the inadequacy of urinalysis, there is one urinary test which I wish to mention. It is the concentration test, and because of its simplicity it can be easily carried out with very little inconvenience to the patient or physician. The patient is allowed to eat supper, containing not more than eight ounces of fluids. He neither eats nor drinks anything else until the test is completed. Before retiring he voids and the urine is discarded. On awakening he remains in bed and three specimens of urine are voided at hourly intervals. The specific gravity is taken on each specimen and the highest is taken as a maximum. If kidney function is normal, a concentration of from 1.025 to 1.032 will be attained. In severe renal impairment the specific gravity is under 1.020. This test is valuable in beginning nephritis as it sometimes shows an inability to concentrate at a time when the blood urea is normal because the kidney is compensating for its inability to concentrate by an increased output of water. Any deviation from the normal should be followed up with a study of the blood and functions tests with dye. The application of these tests routinely, each in its proper place, will result in the detection of many cases with renal impairment who would otherwise have gone on to operation without adequate preparation and with less than a normal chance at recovery.

Acidosis has been defined as a depletion of the fixed alkalies in the blood. The exact nature of the reaction is still not well understood, but two constant factors are noted in the blood regardless of the type of acidosis, and these are a lowering of the blood sugar and of the CO_2 combining

power. In upper abdominal surgery, particularly operations on the gall-bladder and ducts, acidosis is one of our most frequent and dreaded complications. Examination of the blood before operation will often reveal low blood sugar and CO_2 volume per cent, and in these instances proper administration of glucose will certainly lessen the amount of acidosis and may even prevent it altogether.

Alkalosis which is much rarer and more difficult to control is sometimes a complication in upper abdominal surgery. The symptoms of the condition are very similar to acidosis; namely, weakness, nausea, headache, muscle aches, drowsiness, and later protracted vomiting. Fortunately, the blood picture is very different. The CO_2 combining power is high and there is a decrease in the blood chlorides. Blood chemical analysis is the only way to differentiate these two conditions which differ so widely in the treatment and yet resemble each other so strikingly in their clinical manifestations.

In diabetics, regardless of the kind of surgery done, acidosis is to be feared, but here again blood sugar estimation with the proper administration of insulin gives these patients almost as good a chance as a normal person would have.

I wish to mention here in connection with diabetes another marked discrepancy in the urinary and blood chemical examinations in a case recently called to my attention. This patient came to the hospital for a minor surgical operation; the examination of the urine on several occasions showed only a trace of albumin, a blood sugar determination showed a concentration in the blood of 400 mg. per 100 cc. of blood. In view of the fact that 180 mg. per 100 cc. of blood is considered about the normal kidney threshhold, it is almost unbelievable that a patient could carry nearly four times this amount in the blood without having some overflow into the urine.

I have mentioned shock not with the idea of discussing it fully, because that would require volumes, but merely to suggest a measure in its treatment which has recently been recommended as being very beneficial in some cases. It has been known for a long time that the blood chlorides, and to a lesser extent blood sugar, are diminished in shock. This same state of affairs exists also in toxic states and cases of continued vomiting. Because of the diminution of the blood chlorides and blood sugar, intravenous administration of hyper-tonic salt solution has been recommended, 100 cc. of 20 per cent saline being suggested as the ideal amount. Dr. Julius Crisler in a paper read before the Central Mississippi Medical Society this year recommended the procedure very highly. Personally, I have had an opportunity to try it out in conjunction with small doses of insulin and glucose in only two cases—one of these was a patient in extreme shock who was seen hours after the injury, and in this case the patient died a few hours after admission to the hospital apparently not benefited even temporarily by anything that was done for him. In the other case, a man who had a badly comminuted fracture of the tibia, exhibiting typical signs of shock, but who was brought in immediately after injury, this method of treatment was employed in conjunction with the other measures recommended and he reacted well in about two hours. It is not possible to say until a large number of cases have been studied whether or not this measure is of benefit but it is certainly worth a trial.

In conclusion I wish to reemphasize the importance of a blood analysis in pre-operative cases since I believe no one means at our disposal so accurately guides us in our pre-operative treatment and prognosis.

DISCUSSION.

Dr. W. H. Parsons (Vicksburg): I enjoyed Dr. Sparks' paper very much. I think that he brought in in his paper the fundamental thing we desire in surgical and medical cases, and that is life, and the points that he has emphasized tend very much toward that preservation. I believe that a majority of us, in a majority of cases, have contented ourselves with simply a routine

examination, and a routine urinalysis, and from these have brought out the fact as to whether or not the patient is a fit subject for surgery. I think a certain percentage of our mortality has resulted from that superficial examination. I believe we have attached too much importance to urinalysis and without disparaging that examination, I think that it is a matter of minor importance.

Dr. Sparks cited a very interesting case in which a negative urine was disclosed, yet urea was high in the blood. I recall two cases of mortality that I myself had, both in surgery of the upper abdomen, and both these cases were examined according to the average fashion prior to surgery, and both accepted as fit subjects. One was referred to me as being acceptable for surgery by a very competent internist, but about the fourth day after surgery acute nephritis developed and death followed very promptly.

I think Dr. Sparks has brought to us a very interesting paper and while there is a great tendency to be careless because of the fact that the vast majority of all patients on whom we operate will survive, I think that they frequently survive not because of the care they have had, but because of the wonderful machine with which we deal. But the occasional mortalities we do have and which distress us so very much, I think in many cases could have been averted had more care been taken in preparing those cases for surgery. The majority die because of some breakdown in the machine to which possibly we gave scant attention prior to surgery.

Dr. G. S. Bryan (Amory): I think this is too valuable a paper to go undiscussed. I want to say I thoroughly enjoyed that paper. We are not in the infancy of blood chemistry. Blood chemistry has been done in relation to surgery and medicine enough to prove it to be a valuable procedure in all cases. I was particularly struck with the acidosis discussion in this paper. I believe that when a person is sick there is a dysfunction of different organs of the body, whether the kidney, or the pancreas, the liver or other internal secretory organ. So far we have developed simple technique by which we may be able to determine largely how much dysfunction of these different organs there is. The blood determines the case. Take for instance, what really happens in acidosis in the case of the diabetic, where we get an over production and severe acidosis. There is no organ exempt from the ravages of acidosis. We know that the body requires food. We know that each gram of protein is capable of producing 4 calories of heat; we know that each gram of fat is capable of producing 10 calories of heat; we know that each gram of carbohydrates produced 4 calories. Now in any disturbance of the normal relation of this soil, if we take the proteins, the fat and the carbohydrates —if that soil is getting enough, the normal function will go along; if there is a disturbance of the carbohydrates, if they are drawing on the fats and the proteins to offset that disturbance— if this soil gets enough carbohydrates it will function more or less normally, but if it does not get enough in drawing on its proteins and its fats then there is ketone body formed. So it strikes me in the preparation of the patient for surgery, it will be necessary to determine what the percentage of increase or decrease in acidosis content of the blood is, whether you call it acidosis or alkalosis. We can do that, and I think in well regulated hospitals it is more necessary that we have it before doing surgery, to test whether the kidneys function, to make an exploratory test to determine the status of that patient before he goes on the table.

Dr. L. S. Lippincott (Vicksburg): This subject is particularly interesting to me. Just one point in regard to surgery on diabetics. It can be done with insulin without any trouble, but I want to emphasize that the patient have a good supply of vitamins in the liver at the time of the operation. To get that supply the patient should not be starved but receive plenty of carbohydrates; that can be done with the use of insulin prior to the operation. Following the operation the use of carbohydrates has to be continued because if you starve the patient, he will use his own body fat and that requires carbohydrates for dilution. If he hasn't got it, it will cause acidosis and a good supply of vitamin in the liver will help to overcome that, but you must keep on with the carbohydrates afterwards. The patient may die from acidosis because of lack of carbohydrates.

Dr. John C. Culley (Oxford): I do not want to rise to discuss this paper, but while I feel I am young, yet I believe I am old enough to appreciate the fact that young men are coming on in this association, and it is particularly gratifying to us of Ole Miss when we come down here and see fellows like Tommie Sparks get up and read such a paper as he did, and it refutes the idea prevalent among some, that Ole Miss hasn't a medical department. I am mighty glad to hear that paper.

Dr. T. J. Sparks (closing): I haven't anything to add except to thank the gentlemen, particularly Dr. Culley, for the discussion.

LOCAL ANESTHESIA OF THE PELVIC OUTLET.

CARROLL W. ALLEN, M. D.,
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The tremendous developments in general anesthesia in the last decade with the perfection of special apparatus and the introduction of new, safer and more agreeable general anesthetics administered by specialists in this branch has greatly lessened the need and use of local and regional methods of anesthesia as developed by the master surgeons in this field thirty or forty years ago. Notwithstanding the tremendous strides made by general anesthesia there must still remain selected cases either due to the physical state of the patient, the nature of the operation, or the convenience of the operator, when so located that a skilled anesthetist is not available, where local anesthesia is ideally suited to the case; and in the hands of those surgeons skilled and accomplished in this art may even be preferred under all conditions to general anesthesia.

The anal and vaginal canals form a particularly inviting field, due to the arrangement and accessibility of its nerve supply. This region with its rich pathology is a fertile field for the surgeon and many of the conditions encountered here can be better operated under local anesthesia than under general narcosis.

The entire problem is one of a study of nerve anatomy, and how best to reach these nerves with our anesthetic solution. Briefly anatomy plus anesthetic technic. We can best understand the various steps in the anesthesia by keeping in mind the nerve anatomy. The entire supply is from the plevic nerves, the pudic, inferior pudenal and coccygeal.

The pudic is the motor and sensory nerve of the anal canal, the other two supply the skin and subcutaneous tissue of the perianal region. The pudic nerve, derived from the sacral plexus, passes out of the pelvis, curves around the spine of the ischium, reenters the pelvis and courses downward, forward and inward passing along the side of the rectum about three inches above the anal outlet. Giving off the branches to the sphincter muscles in this position, it continues forward supplying the cut off muscle of the bladder and terminates as the dorsal nerve of the penis.

The inferior pudendal nerves passes out of the great sacrosciatic notch behind, lying to the outer side of the sciatic nerve, and passes downward and forward running alongside of the anal canal to terminate on the posterior surface of the scrotum or lower part of the vulva supplying the skin and subcutaneous tissues of these parts. The coccygeal nerves, several in number, run forward from this process to the perianal tissues.

It is seen from a consideration of the above that two plans of anesthesia are available; one to reach the nerves at their origin in the sacrum or at the plexus; the other to anesthetize them as they reach the anal canal. Both plans have their advantages.

Spinal anesthesia is, of course, available here but is not included in the strict acceptation of the term "local anesthesia" and is too dangerous to use routinely.

There are several different methods of reaching the plexus as it lies in the hollow of the sacrum, or the individual nerves just as they leave the plexus, but an exhaustive study of the subject with a description of the various methods for anesthesia is not possible on this occasion and the two methods which I will describe are simple and meet all conditions.

Sacral or epidural anesthesia aims to reach the sacral nerves in the sacral canal after they have passed out of the dural sac.

The dural sac terminates opposite the second sacral segment and the nerves, after

passing throug it, run for a short distance in the canal before passing out through the sacral foramina. The object is to reach them all at this central point. The sacral canal is small and its foramina large and numerous and any injection made here rapidly runs out in all directions as well as passing up the spinal canal outside the dura. It is for this reason that it is necessary to flood the canal quite liberally and in case the patient is to be operated in a lateral position, as I sometimes prefer, to allow him to turn on his back for a few minutes after the injection is made otherwise the solution will run to one side and produce a one-sided anesthesia.

The injection is made through the sacral canal which terminates at the lower end of the sacrum just above the coccyx. It is best to study this on the skeleton before attempting the injection. It will be seen that the canal opens at the base of the last sacral spine in an inverted V shaped opening, each leg of the V at its lower end terminates in a little nodular process or cornu, which can be readily felt.

In making the injection the patient can lie in any position preferred, the lithotomy position, Sims position, or he may sit across a table with his back slightly projecting across the edge.

The injection is made by anesthetizing the skin and passing a long needle into the sacral canal after having properly indentified its opening. The needle is slowlv advanced feeling its way into the canal to a depth of about two inches. It is not necessary or advisable to go too deep as it is possible if the needle is advanced too far to enter the dural sac, this however is very unlikely and can be guarded against by slightly aspirating with the syringe before making the injection.

Having advanced the needle to a satisfactory depth the injection is slowly made using about 20 to 25 c.c. of a 1 per cent solution of novocain containing three drops of adrenalin to the ounce.

Anesthesia usually results in about three to five minutes in all the pelvic nerves except the great sciatic, this being rather too large to be affected by this method but usually shows a slight numbness. The average duration of anesthesia is about forty-five minutes but may last longer.

This method of anesthesia is preferred in extensive operations or complicated conditions, particularly in old fistulae with multiple openings surrounded by callous tissue where infiltration is difficult, in hemorrhoids complicated with fistulae or in female patients where a perineirrhapy or some vaginal work is to be done in addition to hemorrhoids or fistula.

It will be seen by a consideration of the nerve supply that this method has quite an extensive application, anesthetizing all of the pelvic nerves except the sciatic it produces an anesthesia of the perineum, anal canal, vaginal floor, uterine cervix and vault of vagina, base of bladder, prostate and distal half of penis, and consequently can be used in all operations on these parts. It has been used to much advantage in the second stage of labor but the difficulty here is to properly time the injection so that the anesthesia will be effective when the head reaches the perineum.

In using this injection for vaginal work it must be borne in mind that the anterior vaginal wall and anterior half of vaginal outlet are not anesthetized except the clitoris, which is the analogue of the penis and is anesthetized through the pudic nerve anesthesia. It should be mentioned here that while the cervix and neck of the uterus are anesthetized its fundus is ordinarily not affected but this part at most has little sensation. These parts just mentioned as escaping the anesthesia it will be remembered receive their nerve supply from the lumbar plexus.

Anesthesia of the anal canal by the direct method of anesthesia is accomplished as follows: a circle of anesthesia is first established around the anal canal at the mu-

co-cutaneous junction. This is best done by starting about one inch or more away from the anal margin where the skin is less sensitive, using a fine needle and working toward the anus and progressively passing it around its margin. With this anesthetic circle established a finger is then passed into the anal canal, a long needle attached to a 5 cc. syringe is then used and the needle passed up outside or through the external sphincter injecting as the needle is advanced to a depth of two or two and one-half inches. Four points are selected for this injection, one on each side and one in front and behind.

In cases of ulcer or fissue a small pledget of cotton wet with 1 per cent or 2 per cent solution of cocain can first be placed in the canal but this is not necessary if care is used and the deep injection first made just beneath the ulcer. Following these deep injections, anesthesia is almost immediate and the operation may begin at once, preceded by thorough dilatation of the canal. These injections are all of ½ per cent novocain solution containing four drops of adrenalin to each ounce.

In uncomplicated cases of fistula the anal canal is first anesthetized as above and with the finger still in the canal the long needle is entered just outside the external fistulous opening on its distal side and passed upward toward the canal, injecting slowly until the canal is reached.

The above method of anesthetizing the anal canal is the simplest and quickest and gives immediate and complete anesthesia by establishing a zone of anesthesia just outside the canal by the diffusion of the solution which quickly surrounds the canal and through which all nerves must pass and are blocked before reaching the canal.

It will be found in cases of hemorrhoids operated by this method that they are found in their normal condition, they are not edematized by the injection as it is made well outside of them and the troublesome congestion usually seen under general anesthesia is absent. The vascularity of the parts is also controlled by the adrenalin in the solution which produces an ischemia as the pudic arteries which supply these parts come down with the pudic nerve from the spine of the ischium and follows the nerves in its distribution. For this reason the operation is practically done in a bloodless area which adds greatly to its facility and simplicity.

Regarding the types of operations done on these parts it would seem unnecessary to enumerate them as all operations are possible in anesthetized tissues and each surgeon has his own favorite methods of dealing with the different pathological conditions.

THE ROLE OF BANANA IN THE DIET OF INFANTS.*

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Two years ago I reported before the Orleans Parish Medical Society a series of 90 infants, ranging in ages from four months to two years, to whom banana had been fed as a fraction of the routine dietary. A subsequent communication a year later brought the series to 140 cases and the present report includes some 250 babies.

If, in retrospect, we recall our teaching of infant feeding in the medical schools a decade or more ago, we must be impressed by the extreme caution that was exercised when milk only was allowed during the first year of life. We now see how groundless such caution was and as our knowledge of the physiology and bacteriology of the infant gastro-intestinal tract broadens we become more rational in our feeding of babies. Chemical and biological analysis of our food stuffs, supplemented with animal feeding experiments, has placed scientific feeding on a plane never before achieved, albeit much remains in obscurity. Napoleon's dictum that an army advances on its

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stomach might be generalized by saying that the health and vigor of a nation depend upon what goes into the stomach of its babies.

CHEMISTRY OF THE BANANA.

Allow me to detour a moment in order to refresh your memories as to the composition and biological characteristics of the banana.

In the green fruit the carbohydrate fraction is made up of 1.2 per cent glucose, 6.5 per cent sucrose and 14 per cent starch. As the fruit ripens the starch is split by enzymatic activity within the pulp so that in the fully matured golden-brown skin banana we find 11 per cent glucose, 8 per cent sucrose and 1 per cent starch.

Protein constitutes less than 1 per cent of the edible portion and the fat is entirely negligible. In the ash, Sherman reports these percentages—CaO 0.01; MgO 0.04; K_2O 0.50; Na_2O 0.02; P_2O_5 0.055; Cl 0.20; S 0.013 and Fe 0.0006. In comparison with other fruits in common use, such as orange and lemon, it is low in calcium, high in phosphorus and magnesium and excells in iron all other fruits excepting strawberries. Cellulose makes up about 0.8 per cent of the edible portion.

As to vitamins. Several investigators report that Fat Soluble A is present in sufficient quantity such that 0.5 per cent of banana added on a dry basis to a vitamin A free basal ration will prevent xeropthalmia in rats.

Eddy and Kellogg have shown that while banana is not rich in vitamin B, it has at least the same B value as tomato juice.

As regards the antiscorbutic factor the banana is second only to orange juice. The evidence at hand indicates a deficiency in antirachitic factor D while Evans and Burr have shown the presence of E, though it is not rich in this factor.

The energy value of the banana is represented by one calorie per gram of ripe pulp or 447 calories per pound.

The inner portion of the pulp has been found sterile, the inner coat of the peel very sparsely inhabited by bacteria.

PREPARATION OF BANANA.

In selecting a banana to be fed to a baby, it is quite essential that a number of requirements be fulfilled. In the first place the banana must be thoroughly ripe and time must be taken to explain to the mother what is meant by this. There must be no green in the skin, it must be entirely yellow with black spots or the skin may be brown provided the pulp is not mushy or brown. Secondly the banana must be completely macerated, preferably through a fine wire mesh sieve. Lastly judgment must be exercised in not giving too much to the baby. They all love it and would eat any quantity.

In my records of banana fed babies, I find that of the total number of 258 there were 3 whose stools became quite soft with a tendency to diarrhea. In such instances it was discontinued. One baby vomited every time banana was given.

The constipated babies were greatly relieved, for the most part no other measures being directed against the constipation. The stools change in respect to color and consistency after banana feeding. They assume a grayish color, are soft and frequently show small black threads. In the absence of diarrhea there is no increase in the stool fat as shown by Soudan 3 staining.

When starting a four or five months old baby on banana feeding, 1 teaspoonful only of the mashed pulp is given for the first few days. If well tolerated it is increased cautiously up to 6 or 8 teaspoonfuls. If the baby refuses it the first time, it is offered again on subsequent days and the dislike invariably changes to a desire for more.

Of the diseases in which banana has a definite therapeutic indication, celiac disease and scurvy are representative. Numerous reports in recent years have clearly indicated that in celiac disease the banana carbohydrate is the only form of carhody-

drate that is tolerated and it is thus a valuable addition to an otherwise monotonous protein diet.

In clinical and experimental scurvy, the banana is curative. Because of its low protein content banana is a valuable adjunct to the dietary treatment of nephritis.

SUMMARY.

Often called the "poor man's fruit," the banana is always plentiful and cheap; it is a nutritious, easily digested form of carbohydrate that nature puts up in a sterile container. Infants as young as four months tolerate ripe banana perfectly when given in moderation. All vitamins except antirachitic D are well represented.

HERMAPHRODITISM.

REPORT OF CASE OF PSEUDO-HERMAPHRODITISM.

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NEW ORLEANS.

Among the earlier authors Ahlfeld[1] defined a true hermaphrodite as one who could fecundate another and also be impregnated by another individual, or, in fact, could impregnate oneself; and to carry it further, produce a progeny of its own. This definition is the purely theoretical and ideal conception of true hermaphroditism, for it would mean that both gametes proper must be present in the same individual in a mature state in order to function. Pick defined hermaphroditism as a mixture of opposite sexual characteristics in one individual.

Young[2] defined a true hermaphrodite as one in whom the gonadal elements of both sexes are present and classified them as follows:

(a) Bilateral, in which there is one testicle and one ovary on each side of the body, four gonads in all.

(b) Unilateral, in which there is a testicle and ovary on one side and a single gonad on the other side, three gonads in all.

(c) Lateral, in which there is a testicle on one side and an ovary on the other.

(d) A fourth type, in which there are only two gonads, but in which one or both of them is an ovotestis containing both ovarian and testicular elements.

In true hermaphroditism the external characteristics may be those of either sex; rarely have the characteristics of both sexes been present at the same time or at successive periods. The external and internal genitalia may show any of the anomalies of which these structures are capable. We were able to find only twelve acceptable cases of true hermaphroditism reported up to the present time.

Numerous theories as to the pathogenesis of true hermaphroditism have been developed. The following are the outstanding ideas:

(1) Sauerbeck maintains that hermaphroditism is the result of an atavistic developmental hindrance; the primary state of true hermaphroditism or bisexuality changes in normally developing embryos into monosexuality; pseudo-hermaphroditism is the incomplete disappearance of one sex.

(2) Tandler and Gross conceive true hermaphroditism and pseudo-hermaphroditsm as a malformation primae formationis without any known developmental cause; they do not believe in the existence of true hermaphroditism as the primitive sexual form of the metazoa.

(3) Kermauner does not believe in the existence of true hermaphroditism. He considers it as a form of pseudo-hermaphroditism, which according to his conception is a local mechanical genital malformation. This leads to the rejection of the bisexual analage of the germinal epithelium.

Kwartin and Hyams[3] enumerated the chief characteristics of true hermaphroditism as follows:

(1) In all cases of true hermaphroditism there is a mixture of external male and female sexual characteristics.

(2) Most undoubted cases of true hermaphroditism possess either unilateral or bilateral ovotestis.

(3) According to most observers the ovarian part of the ovotestis lies cephalad, the testicular dorso-caudad.

(4) In most cases the testicular part of the ovotestis is larger in size than the ovarian.

(5) In almost all cases of ovotestis the ovarian portion is highly differentiated; in the ovarian stroma primitive, primary or mature Graafian follicles with egg cells, corpora lutea and corpora fibrosa can be recognized.

(6) This indicates activity on the part of the ovarian stroma which may be manifest in spotting or regular menstrual bleeding.

(7) The testicular portion of the ovotestis or of the alternating gland proper shows the following characteristics:

(a) It is small, atrophic or rudimentary.

(b) Histologically it exhibits more or less completely the features of a cryptorchic testicle. There is an imperfect development of the cell elements in the seminiferous tubules. Although Sertoli cells can occasionally be recognized, these may be absent and the basal membrane lined by one or several layers of epithelial cells, interpreted by numerous authors as archispermatozoa or spermatagonia. The differentiation may go further and spermatocytes, spermatids and even spermatozoids are said to have been found. Mature spermatozoa have never been shown to be present in a case of true hermaphroditism. Burden and Masson's statement that spermatozoa were found should be weighed carefully, the study of their photographs does not indicate a higher stage than that of spermatocyte. In many of these testicular portions, especially after puberty, there is a marked increase in the elements designated as Leydig's interstitial cells, which are claimed to be responsible for the development of the secondary sexual characteristic. Another feature in many cases is the progressive centripetal hyalinization of the basement membrane.

(8) These morphological features indicate absence of function or hypofunction on the part of the testicular portion; erections and even fluid ejaculations have been noted, yet never were spermatozoa found in this fluid.

Both glands are in a state of hypoplastic development, with dysfunction or complete lack of one or both constituents. Halban's reason for this hypoplastic developmental state is that the impulse for the development of the sexual system as a whole, which normally is concentrated upon one system (either male or female), in case of true hermaphroditism is called to act upon two system (male and female) with the disastrous result that it becomes insufficient to force either of them to the normal degree of development.

Pseudo-hermaphrodites may be divided into:

(1) The male type, in which the external characteristics of the male predominate, the person thus assuming the role of a male.

(2) The female type, in which the external characteristics of the female predominate, the person thus assuming the role of a female.

The majority of cases recorded are of a pseudo type in which the formation of the external genitalia is such as to give rise to the impression that both male and female organs are present but which on operation or necropsy are found to have simply the glands of one sex. The other

sexual parts are mixed or are intermediate and of various degrees of development. It is often found that only with the entrance of adolescence the real sex of the individual becomes manifest. Among pseudo-hermaphrodites the male type predominates.

The thought that hermaphroditism tends toward mental instability is apparently erroneous, for hermaphroditism of any type rarely occurs among mental patients. At the Danville State Hospital there has been only one case of hermaphroditism among 13,830 patients; that is, during the fifty-six years.

CASE REPORT

The patient, a colored male, single, twenty years of age, was admitted to Charity Hospital February 5, 1929, complaining of pains in the right side of the abdomen. Three days previous to admission, mild pains started in the region of the left sacroiliac synchondrosis but gradually moved across the upper sacral region posteriorly into the right iliac fossa, thence down the right inguinal region. Two days before admission, pain and swelling were noted in the right scrotal and testicular region. By the following day the swelling had progressed to the size of a baseball and the pain was severe. Considerable nausea and a little vomiting supervened but these soon disappeared. A sense of fever was noted but no chills occurred. All other complaints were denied; there being no urethral discharge and no discomfort on micturition or on defecation.

The patient stated that he was born with genital peculiarities but rarely had he been sick. In fact influenza eight years ago was the only illness admitted except for a mild attack of the present illness about one year ago. At that time the symptoms were all milder and lasted only four or five days even though no medical attention was sought. At that time no urethral discharge and discomfort on micturition were associated. No history of undue traumatism could be elicited to account for either attack.

By merely conversing generally with the patient one would not suspect any genital peculiarity. He has always stood erect to urinate. For three or four years sexual intercourse with the opposite sex has been indulged in, apparently in the proper manner and with great satisfaction. Seminal discharge occurs at the proper time. Attraction is always toward the female and never to the male. His selection of playmates and all of his associations have been in accord with masculine tendencies.

Nothing could be detected to suggest periodic or cyclic changes in physical or psychic make-up which might be interpreted as synonymous with menstruation.

In the family history no similar or other congenital anomalies could be traced.

Physically the patient was generally well developed, five feet eight inches in height and weighing 140 pounds. The voice was masculine in quality and general conversation revealed a degree of intelligence slightly above the average for his race and age. The hair of the scalp resembled that of the African male. The face was free of all hair except that of a very small and

Plate 1: Rather well developed breasts are apparent; a small keloid is visible medial to the right nipple. The general appearance of the external genitalia is presented.

fine texture. The breasts were rather well developed, about two-thirds the size of an ordinary orange, and presented lobulations of tissue apparently true glandular in nature. Generally the body surface was free of hair of any notable size. Pubic hair conformed to the female pattern.

Plate 2: The separate scrotal masses are seen above and lateral as well as anterior to the small posteriorly displaced penis with well developed glans but no prepuce. The right hydrocele and swelling are apparent.

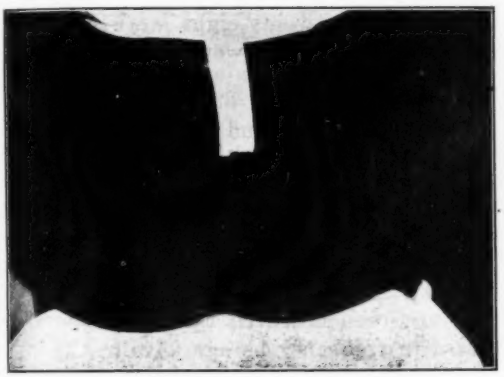

Plate 3: The penis is elevated by a strip of adhesive thus bringing into view the hypospadic urethra. It will be noted that all scrotal tissue is above or to either side of the penis.

Genital examination revealed a scrotum divided into two separate and distinct compartments and masses corresponding in position to labia majora. The left testicle was about one-half the normal size and presented minor lobulations, and a massive division into a lower, medial, smoother and finer portion and a higher, lateral, more irregular and softer portion. Apparently a vas could be palpated leading from the latter portion. The right scrotal content did not lend itself to such complete examination. Swelling, heat, redness and tenderness were in evidence. The testicular mass proper was displaced posteriorly, while about most of its contour could be detected a tense, fluctuant mass about the size of a baseball and answering the description of an acute hydrocele secondary to acute epididymitis. Swelling and edema as well as tenderness followed the spermatic cord into the inguinal canal. Displaced posteriorly was a small penis about one inch in length with fairly well developed glans but without prepuce of any description. The urethra presented hypospadius all the way back to the mid-perineum where its wall became complete and the lumen of normal size; there being no evidence of urethral discharge. Folds suggesting labia minora were in evidence but nothing corresponding to a vagina could be found. A small prostate was palpated by rectum but apparently the left vesicle was absent.

Roentgen ray examinations of the chest and pelvis as well as electrocardiograms, urinalysis, phthalein test, blood picture, blood pressure, blood chemistry and blood Wassermann showed nothing abnormal. Fluid aspirated from the right hydrocele was clear, light amber in color and presented a few endothelial cells, rare leukocytes and no organisms. A specimen of semen obtained from the patient, voluntarily collected by him as a dried spread on a glass slide, presented a sparsity of spermatozoa of normal morphology.

On the night of admission the patient was suffering considerable from pains previously mentioned. The temperature was 100°F. and general restlessness prevailed. Sedatives were given freely and ice bags applied to the right scrotal and inguinal regions. These same measures were continued on the sixth with only moderate relief to the patient. On the seventh, twenty cubic centimeters of a ten per cent solution of calcium chloride were given intravenously; in a few hours all pain disappeared. The same dose of calcium chloride was given on the eighth and again on the ninth. The pains never returned and the swelling and tenderness rapidly subsided. However, even on the sixteenth when the patient was discharged some right hydrocele was present. Operation was contemplated but the patient refused to submit, at least at the present time.

SUMMARY

(1) A variety of definitions, Young's classification of true hermaphroditism and theories of pathogenesis are discussed.

(2) The criteria of true hermaphroditism are enumerated.

(3) Twelve proven cases of true hermaphroditism are on record.

(4) Most cases recorded are pseudo-hermaphrodites.

(5) Pseudo-hermaphroditism may be of the male or female type, the male type predominating.

(6) A case of pseudo-hermaphroditism is reported.

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PROBABLE PRIMARY OVARIAN SARCOMA WITH MULTIPLE METASTASIS.*

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AND

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The greatest number of ovarian sarcoma in children occur between ten and fourteen years of age, corresponding to the transitional period. Of fifteen hundred and thirteen tumors of the ovary collected by Olshausen, sixty-one occurred in girls under ten years of age. Doran found a sarcoma of the ovary in a living seven-months premature baby. Jochmann in 1898 recorded twenty cases of solid tumors in children. Hubert in 1901 recorded one hundred and seventy-five cases of both solid and cystic tumors up to the age of seventeen years as follows:

Benigin tumors:

Dermoids	39
Cystomata	19
Cysts	53
Haematomata	4

Malignant tumors:

Carcinomata and cystocarcinomata	28
Epitheliamata	4
Sarcomata and cystosarcomata	28

Thus in this series we find approximately one-third malignant and two-thirds benign tumors.

Klauhammer in 1912 stated that half of all ovarian tumors in childhood are dermoids. Hubert found sixty malignant tumors in one hundred and seventy-five ovarian tumors in children, a proportion vastly greater than in adult life. Of the sixty malignant tumors thirty-two were sarcomas and twenty-eight were carcinomas. The sarcomas were largely of the round-cell variety.

Of the one thousand ovariotomies performed by Wells, only three were on children In contrast we have the record of Olshausen who performed seventeen hundred and sixteen ovariotomies, sixty-one of which were on children.

It has been observed that cystomas increase in frequency as age advances.

According to Eisendrath, lymphosarcomas are rare in children.

Schiffey, in 1925, reviewed the literature on one hundred and eighteen cases of sarcoma of the ovary in children. He finds sarcoma of the ovary in general, a trifle less than 4 per cent, and that 18 to 25 per cent of all ovarian neoplasms in children are sarcomas. Fifty-nine per cent occur before the age of fourteen. Only one-fourth of the patients gave evidence of precocity.

Malignant growths of the ovary in children are rarely recognized early enough to operate successfully, and the prognosis is accordingly very grave. Sutton collected twenty-one cases of sarcoma of the ovary operated in childhood with a mortality of 52 4-10 per cent. Harris successfully removed a sarcoma of the ovary from an in-

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fant of twenty-two months. Two fatal cases are recorded by Hoffman and Cameron at twenty-two and forty months. Byford has a successful case at four years and four months. Rhorig removed a round cell sarcoma of the ovary, the size of a man's head, from a thirteen-year-old girl, the tumor was of rapid growth and there were no metastases. A moderate amount of ascites co-existed. Guibal successfully removed an ovarian sarcoma from a child less than three years of age.

Carcinoma of the ovary has been observed less frequently than sarcoma. Hunt reported a carcinoma of the ovary weighing 1000 grams. Precocious development was marked corresponding to puberty.

CASE REPORT.

I was called to see the patient on February 17, 1927, and elicited the following: The family history was negative, the patient was an only child of four years. She was normal at birth and developed normally up to the summer of 1926. She had had none of the diseases of childhood, and only infrequent colds marred her otherwise perfect health record. During August, 1926, the mother noticed that she had passed some worms, from the description given they were probably Ascaris lumbricoides. The mother thought that the child was looking pale, had a large abdomen, and that she needed medical attention, so the family doctor was visited. Through personal communication he stated to me that, "The child had a pot-belly, was anemic and that through the mother the child complained that she had difficulty in breathing while trying to sleep." A prescription for worms were given without an examination. This was the only contact he had with the case. The mother said that the child improved some after this treatment; however, in December, 1926, a local surgeon was consulted. After an examination he deducted that the case was one of tubercular peritonitis and so informed the family. (This physician stated to me later that all the earmarks of the disease were present in this patient, *i. e.*, distended abdomen, ascites, pallor with marked emaciation, temperature of a low grade was present and many irregular masses could be palpated through the abdominal wall. No laboratory or tubercular skin test were made. Palliative treatment was prescribed as the case was to all appearances hopeless.)

The little patient was half reclining in a rocker, marked pallor was noted, the expression was anxious and pinched. The head and neck were negative. The chest presented the asthmatic picture, many wheezes could be heard and the respirations were rapid and labored. The abdomen was greatly distended, symmetrically. The abdominal wall was thickened and rigid. Many irregular masses could be palpated in the abdomen but except for the liver and spleen (both of which could be felt 10 cm. below the costal margins) no distinct outline could be made of any mass. A great deal of free fluid was apparent in the abdomen. The extremities were negative except for extreme emaciation. No superficial lymph glands were palpable. There was no sexual precocity. There was no diarrhea nor vomiting. The patient was unable to walk, could only speak with difficulty, but insisted constantly to be taken for a car ride. There had been no night sweats.

An intra-cutaneous tubercular skin test was made (negative at the end of twenty-four and forty-eight hour period), also paracentesis abdominis, but only about 300 c.c. of fluid could be withdrawn.

Laboratory reports (Dr. L. A. Hebert): Ascitic fluid: Color, greenish straw; sg. 1013; albumen, 35 gm. per liter; leukocytes, 22,500; large lymph., 97 per cent; small lymph., 3 per cent; erythrocytes present in centrifuged sediment; no bacteria in gram or acid fast stain. Serum Wassermann negative. Blood picture: Haemoglobin, 58; color index, 66; erythrocytes, 4,420,000; leukocytes, 12,600; lymphocytes, 23 2/3 per cent; endothelial leukocytes, 12 2/3 per cent; neutrophils, 62 1/3 per cent; eosenophils, 2/3 per cent; basophils, 2/3 per cent; poikilocytosis, anisocytosis and polychromatiphilia present. The urine showed intermittent hematuria, albumen was present and there was a mild polyuria. No specific sediment was noted.

The patient gradually became weaker, refusing all food. Two days before death a distinct clinical lobar pneumonia developed in the lower left lobe. On the clinical and laboratory evidence obtained, a diagnosis of "Malignant abdomen" was made and the patient was kept as comfortable as possible. Death occurred on February 28, 1927, eleven days after my first visit.

Autopsy: A-27-1. Date: 2/28/27. Hour: 4 P. M. Name: E. P. Sex: Female. Color: White. Age: 4 years. B. L.: 100 cm. Clinical diagnosis: Malignant abdomen.

The body is that of a fairly well developed but very poorly nourished and blanched female child. Rigor mortis is present in all extremities. Post mortem lividity is present but most marked in the dependent parts. The pupils are equal, symmetrical, and measure about 3 millimeters. No edema is present. No special marks of identifi-

cation are found. No abnormalities or deformities are noted about the extremities. The most striking appearance of the body is the drawn face, shrunken cheeks and prominent malar bones. The neck is slender and emaciated with no prominences or glandular enlargements. The mouth, ears and nares present nothing especially worthy of note. The ribs stand out prominently and the interspaces are depressed. The skin is rather pale and tense. The abdomen is enlarged out of all proportion to the other body lines. This is quite apparent from the lower costal margin anteriorly, and on downward toward the umbilicus. The crest of the bulging again ascends followed by a gradual decline toward the left pelvic region. Palpable irregular masses are felt through the abdominal wall. They are rounded firm and continuous one with the other, and do not change or shift position on moving the body.

Peritoneal cavity: On opening the peritoneal cavity the distended intestinal coils are forced through the incision. On inspection several large masses are found in the left inguinal region. The appendix is considerably enlarged, free from adhesions and intact as it lies retrocaecal. The dome of the diaphragm extends to the seventh rib on the left side, and to the sixth interspace on the right side. The coils of the intestine are free from adhesions and inflammatory exudates, except at a point on the median line on the under surface of the transverse colon.

All of the mesenteric and retro-peritoneal lymph glands are enlarged, the largest gland having attained the size of a hen's egg. The omentum is somewhat thickened, hemorrhagic in appearance, with definite but small nodular enlargements here and there. A firm adhesion is found beneath the inferior surface of the transverse colon in the median line to a mass found in this area. In attempting to break up the adhesion between the omentum the transverse colon and the tumor mass there is revealed a necrotic area involving all the coats of the gut. The lumen of the intestine is easily brought into view, for the intestine here is perforated by a necrobyotic process. This is the only evidence of necrosis found in the autopsy. The spleen is found in its normal position and is enlarged. The liver is enlarged and extends approximately 6 centimeters below the right midcostal border. The diaphragm in the region of the vertebral column and aortic opening is somewhat congested and thickened, and the peritoneal surface is uneven and nodular. These nodules are of small size.

Pelvic cavity: This cavity is well filled and prominent due to the enlarged mass found on the left side. An elevated tumor mass in size larger than a golf ball, but smooth, lies beneath the serous coat in the position of the ovary. The tube is adherent and continuous with this mass. The tube is smooth and glistening and gradually tapers toward a small but well developed child-like uterus. At first it is rather difficult to definitely determine this tumorfaction as involving the ovary and tube. The ovary and tube on the right side are about the normal size and appearance. In contrast to the right tube is the enlarged non-inflamed appendix. A small amount of cloudy transudative fluid is found in the pelvic cavity and dependent parts of the abdomen. The urinary blader and uterus present no enlargement. The enlarged mesenteric and retro-peritoneal lymph nodes of this region present no evidence of breaking down. The coils of the intestine are free and present no pathology.

Pleural cavity: Both cavities are smooth, moist and free except in the left side where tags of recent adhesions are found. A small amount of blood tinged fluid is found at the base and dependent portions of the left cavity. The right cavity presents nothing especially worthy of note. The pericardial sac in the mid line is much thickened, and several small nodular masses are found here and there in the loose, bogy oedematous fatty tissue. The blood vessels of the posterior sternal group are congested and a few small nodular masses are found along the posterior surface of the bone. The parietal pleura covering the diaphragm is involved in a progressive infiltrative process for a limited area in the region of the great vessels.

Pericardial cavity: On opening this cavity the usual clear amber colored fluid is found somewhat increased in amount. No other pathology is noted.

Heart: The heart is about the average size, is soft and flabby, and is a pale reddish brown color. The visceral, pericardium and coronary vessels present no special pathology. The pulmonary artery contains only fluid blood and post-mortem clots. The valves and endocardium present no vegetation or new growths. The rings of the tricuspid and mitral valves are loose and gaping. The myocardium offers very little resistance and is friable.

Lungs: Both lungs are voluminous and crepitant and float. The lobulations of the right lung are distinct, and the serous surface free from exudates and adhesions. A slight discoloration due to pigment deposits is noticed. The lower right lobe is somewhat more voluminous and tense in the dependent portion. On sectioning a sero sanguinous material free from pus exudes on pressure. The upper and middle lobes are relatively free from abnormalities. The lower left lobe stands out in distinct contrast to the upper of the same side. The upper left lobe is

somewhat discolored and hyperemic over the area in apposition to the corresponding lower lobe. Some frothy material is found in the lower and dependent portion. The lower left lobe is involved in an inflammatory process evidenced by the voluminous and reddish appearance. The visceral pleura is considerably thickened, roughened and congested, with comparatively recent adhesions to the parietal pleura. On sectioning the lower left lobe bright red blood and serum exudes, while here and there over the cut surface is found cream yellow exudative material about which firmer areas of lung tissue are apparent. The structure of the lung is more dense in these areas. No other pathology is noted in the lungs. They as a whole being free from visible evidence of metastasis. The peribronchial lymph nodes are enlarged as well as many of the mediastinal glands. These vary considerably in size from the average normal to that of small marbles. On sectioning some are found to contain pigment. The larger nodes show pigment and infiltrating masses with no evidence of necrosis or caseation. They are firm with a gelatinous pearly colored surface where sectioned and seem to present no attempt to coalesce. The lymph glands about the trachea present the same general picture. The mucus membrane of the trachea and larger bronchial tubes bears evidence of congestion and is covered with a mucoidal exudate. No nodules are found therein.

Spleen: The spleen is large, well shaped and slate colored. The capsule is somewhat thickened. Here and there grayish white nodules appear over the cortical surface, which push the thickened capsule in its advancing growth. The cut surface is a dark brownish red color, the trabiculae are well marked. Here the same grayish white nodules of sizes varying from small specks to split peas are found. No evidence of necrosis is seen.

Gastro-intestinal tract: This tract presents no pathology of moment except the erosion and ulceration found on the inferior surface of the transverse colon in proximity to the broken down mesenteric node previously mentioned. This process involves all coats of the gut, and tears in the attempt to separate the contiguous surfaces. Drainage appears to have followed this course.

Appendix: The appendix is uniformly enlarged throughout. It is rather long, with congestion and thickening of the serosa. Though the anatomy of the organ is distorted and changed in the new growth process, the organ is free from pus. The lumen is free of exudate and feces. The increased size of the organ is due for the most part to thickening of the submucus layer, and to no apparent stromal tissue increase. The caecum at the appendiceal junction is uniformly thickened, particularly in the lymphoid coat. The extent of this enlargement ends rather abruptly in the immediate area.

Pancreas: There is no apparent involvement of this organ.

Liver: The organ is enlarged, and presents a dark reddish brown color. The capsule and visceral surface present nothing especially worthy of note, except a discoloration in and about the gall-bladder region. The gall-bladder is filled, the ducts patent and empty. On sectioning the liver, the cut surface is reddish brown in color, and free blood pours forth. No metastasis is found.

Kidneys: Both kidneys present the same general appearance, being enlarged, dark reddish brown in color with several small nodules here and there beneath the capsule. The capsule strips readily, and is somewhat thickened. On sectioning the cortex the cut surface is congested, and swollen, and several infiltrating nodules are found in the medullary and cortical portions. These grayish white areas are rounded in outlines, and some are very small, the largest being the size of a small marble. There is no necrosis, but rather an advancing infiltrative process with displacement of kidney substance.

Adrenals: The adrenals present no special pathology.

Urinary bladder: The urinary bladder presents nothing worthy of note.

Genital organs: The left tube and ovary are involved in one large tumor mass formation, irregular in outline, and about the size of a large Irish potato. The mass recognized as, and occupying the position of the ovary, is round, smooth and regular attaining a size somewhat larger than that of a golf ball. On sectioning, this growth presents a grayish white gelatinous appearance. It is uniform in color, soft, but firm in consistency with no evidence of necrosis. Intimately attached to this mass, after a gradually declining depression, and in continuity with the growth is the enlarged sausage like tube. Its contour is not maintained but gradually tapers as it joins the fundus of the uterus where it is only slightly increased in diameter. Sectioning the tube along its course the lumen is found full, and the infiltrating growth seems to involve the coats as well as the mucosa. Along its entire course the tube is continuously covered with a smooth, shining, serous peritoneum, tense in appearance. No fluid or necrotic material is found in this involved mass. The right tube and ovary are apparently normal in size and appearance and do not seem in any way involved in either an inflammatory or neoplastic process. The remaining genitalia are apparently normal in size and development.

Aorta: The aorta and blood vascular tree present no special pathology.

Brain: Not removed.

Spinal cord: Not removed.

Middle ear and sinuses: Not explored.

Anatomical diagnosis:

Lobular pneumonia—left lower lobe.

Pleuritic effusion—left side.

Chronic myocarditis.

Neoplastic infiltration of lymph glands with necrosis of one in the mesenteric group.

Ulceration and perforation of transverse colon.

Neoplastic infiltration of spleen, appendix, kidneys, left ovary and tube, and diaphragm.

Transudative peritonitis.

Microscopic diagnosis:

Lymphosarcomatous infiltration of left tube and ovary, mesenteric retro peritoneal and thoracic glands, kidneys, spleen, diaphragm and appendix.

Lobular pneumonia.

Acute toxic myocarditis.

Acute parenchymatous nephritis.

The value of the intra-cutaneous test for active tuberculosis is clearly demonstrated in this case.

The extreme and widespread metastasis plus the advanced degree of pathology, involving practically all of the abdominal viscera and thoracic glands, plus some retro-peritoneal organs, make this case one of unusual interest to any practitioner of medicine or laboratory expert. It is almost inconceivable that one could live so long harboring such advanced changes in practically all the vital organs of the entire body.

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A COMPARISON OF RESULTS BY THE WASSERMANN AND THE BUTLER TESTS.

JACK LAZARUS, M. D.,

Stephenson, Miss.

The following series comprises a study of the results obtained in testing 766 specimens of blood serum for syphilis by the Kolmer modification of the Wassermann and the Butler tests.

The Wassermann tests were performed by the technicians of the white and colored units of Grady Hospital, Atlanta, Ga. The same specimens were then tested by the writer, according to the tube test recently devised by Dr. H. W. Butler, formerly associated with the Clinical Laboratory of Tulane University School of Medicine. A comparison of the results was tabulated, and clinical findings recorded in those cases in which the two tests differed. The study was undertaken, not with the purpose of showing the superiority of one test over the other, but rather to find out to what extent the results of the new test coincided with those of the method more universally used at present.

The technic of the Butler test consists in measuring one cubic centimeter of the Butler antigen into a 20 c.c. test tube and 10 c.c. of a 3 per cent saline into a second 20 c.c. test tube. Both tubes are then heated in a water bath at 56° C. for two to five minutes. The contents of the tubes are poured together and back and forth several times. One cubic centimeter of the mixture, while still warm, is then added to a test tube containing 0.2 c.c. of the non-inactivated blood serum. The tube is shaken well and the reading is made after the tube has stood over night at room temperature. Negative sera remain opalescent, while positive sera produce a precipitate which settles to the bottom of the tube. Little difficulty was experienced in making the readings, the precipitate in the positive cases being readily seen.

Of the 766 bloods tested, the Wassermann results were negative in 640 instances and positive in 126, as compared with 616 negative and 150 positive obtained by the Butler test. Similar results were obtained in 732 or 95.6 per cent of the 766 cases. The Wassermann gave positive results in five cases in which negative results were obtained by the Butler method, whereas 29 cases were precipitated by the Butler test, which gave a negative reaction according to the Wassermann.

No positive history of syphilis could be obtained in any of the five cases which were positive according to the Wassermann reaction but negative by the Butler. Of the 29 cases whose sera were precipitated by the Butler test, six gave histories pointing to syphilis, 20 denied syphilitic infection, and three gave histories of having had positive Wassermann's which became negative following treatment.

The positive factors in the six cases mentioned above are:

Case No. 1. Child is brought in for blood test; mother, with strongly positive Wassermann, taking antiluetic treatment: Butler positive, Wassermann negative.

Case No. 2. No luetic history; spinal fluid Wassermann strongly positive; blood Wassermann negative; Butler blood test positive.

Case No. 3. History of sore on penis; wife sterile: Butler positive, Wassermann negative.

Case No. 4. Denies venereal history; three successive miscarriages: Butler positive, Wassermann negative.

Case No. 5. Ulcer on genitals of five months' duration: Butler positive, Wassermann negative.

Case No. 6. Husband taking injections; one miscarriage: Butler positive, Wassermann negative.

Twelve of the twenty cases which gave positive Butler reactions and negative Wasserman with no syphilitic history were obstetrical cases. Although the number of cases is too small to form any definite opinion, the possibility must be borne in mind that the test may be oversensitive to some component of the pregnant patient's serum which provokes the precipitation reaction.

SUMMARY AND CONCLUSIONS.

1. The Wassermann and the Butler tests showed similar results in 95.6 per cent of the 766 blood run.

2. Five patients gave positive Wassermann findings and negative Butler, with negative syphilitic histories.

3. Twenty-nine patients, six of whom gave histories pointing to syphilis, had positive Butler findings and negative Wassermann reactions. Three of the remaining twenty-three had had positive Wassermann's prior to receiving some antiluetic treatment.

BIOLOGICAL THERAPY*

OSCAR W. BETHEA, M. D.,

NEW ORLEANS

Many of the drugs that we use today were employed in a very similar manner hundreds or even thousands of years ago. The development of this part of our Materia Medica has been gradual through the centuries, and while we have the handicap of many traditional errors we also have the benefit of the accumulated experience of scores of generations of medical men.

On the other hand biological therapy is practically new, most of it having been developed within the professional experience of even the youngest of those present and our reactions to it divide us largely into three groups:

1. Those who, unduly fascinated by the novelty, uncertainty and element of mystery which characterize this new addition

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to our armamentarium, are often led into therapeutic extravagance.

2. Those who, skeptical of anything and everything new or unproven, tend to regard this development as but another fad that "Lighting a little hour or two—is gone."

3. Those who, with minds open to conviction, are conservatively but patiently and persistently availing themselves of every advance and lending their efforts toward the further development of this new field of science.

A large part of the credit for the progress that has been made in biological therapy is due the manufacturers whose untiring efforts backed by almost limitless capital, equipment and man-power have made rapid advancement possible. This very feature, however, has provided the stumbling block for many of the profession. Some of the manufacturers through over-enthusiasm or commercial promptings, have deluged us with extravagant claims and unproven theories presented as facts, till many medical men are discouraged in trying to separate truth from error and envision the whole field as tainted with the shadow of commercialism.

A primary source of trouble here, as elsewhere in the practice of medicine, is the very limited equipment in materia medica and therapeutics that is given their students by most of the medical colleges.

Conservatism seems to have marked the work of the revision committee of the last Pharmacopoeia, for out of over six hundred drugs included only about ten come under the usual classification of "Biologicals."

It may be worth our while to use the limited time available in an evaluation of the present status of this department of therapy, as I understand it.

Biological preparations include sera and preparations from them, vaccines and other bacterial products and glandular preparations.

In prophylaxis these reign supreme. Except for the element of human perverseness, they had conquered smallpox which at one time destroyed or disfigured a fourth of the human race. They have proven almost specific against typhoid, saving annually thousands of lives, and would stamp out this disease if universally applied. When one dies of tetanus or rabies it is, with rare exceptions, practically suicide or manslaughter. The recent work in diphthera, scarlatina and some other diseases has passed the experimental stage and gives promise that these scourges will survive only in medical history.

In specific therapy biologicals already contend for first place. Our old drugs furnish approximate specifics for malaria, syphilis, amebic dysentery and rheumatic fever. Against these biologicals offer the remedies either for curing or for indefinitely prolonging life in diphtheria, epidemic meningitis, sprue, hypothyroidea, pernicious anemia, and diabetes mellitus; probably doing the same for scarlatina, erysipelas and plague; and they offer much help in pneumonia. The last is based not only on the accomplishment of Cole and his co-workers, but also on the recent report of Lambert.

It is only as therapeutic aids and not as specifics that most remedial agents are employed, and here the estimate as to value must be based on that indefinite element known as clinical evidence, and here we naturally find the widest divergence of opinion. In conjunction with the medication there is also brought to bear all the other measures for relief such as rest, diet, elimination, hydrotherapy and physiotherapy. The curative processes of nature and the self-limited character of most diseases must also be taken into account, so it is difficult to state just how mcuh effect any one or even all of the medicinal agents have had—in fact, it is often a question whether we cured the patient or whether he simply got well. This uncertainty obtains particularly in the case of most vaccines and of

many of the glandular products, especially the polyglandular formulae.

There are some beneficial results, however, that seem almost certain: for example,

That the ovarian products lessen the discomforts of the menopause.

That pertussis vaccine lessens the frequency and violence of the paroxysms of whooping-cough.

That preparations of the hypophysis hasten the processes of labor, aid in the removal of intestinal gas, and are of benefit in enuresis.

That preparations of the suprarenals relieve the paroxysms of asthma and are of benefit in many other conditions.

We must also recognize the vast importance of the diagnostic value of some of the preparations under discussion: such as, epinephrine in the diagnosis of diabetes mellitus and thyroid disease; the Widal reaction for typhoid; the Dick test for scarlatina; the Schick test for diphtheria; and preparations of the bacilli in diagnosing tuberculosis.

Many questions yet remain to be answered:

Do the mixed vaccines from the flora of the respiratory tract aid in the treatment of diseases such as coryza, bronchtis, epidemic influenza and pneumonia? Hundreds of thousands have been given the various preparations in a wide range of dosage—and yet we don't know. Personally I believe that they have a field of usefulness.

Do stock or autogenous vaccines have a remedial effect in asthma and hyperesthetic rhinitis? They are used by thousands of clinicians today and rejected by other thousands. Personally I believe that in certain types of these diseases they are of value.

Are preparations of the bacilli of tuberculosis of therapeutic value? I believe that in certain stages of some types of the infection they are.

Is antitetanic serum of value in treating tetanus once the disease has developed? The extensive statistics of the Charity Hospital of Louisiana and much other evidence is against it—yet most of us use the serum in treatment.

Is horse serum as a hemostatic a safe or reliable agent? Many have discarded it. Many rely on it as the mainstay of treatment of hemorrhage.

The skeptics should not be too prone to discouragement on account of some uncertainties, failures and errors in biotherapy. Just think of the status today of much of our old Materia Medica. Remember the millions of camphor injections that have been used as cardiac stimulants, the tons of sarsaparilla given for syphilis, the quinine wasted on pneumonia, and the dozens of alleged specifics for typhoid. Only a few generations ago antimony was the most largely used drug in the world.

Much of the difficulty today, as always in medicine, is to be found in erroneous or imperfect diagnoses and in a lack of intelligent discrimination in selecting remedies. This particularly applies in the new field of endocrine dyscrasias. Aside from a few proven facts, we are still groping in darkness with the full light of perfect knowledge yet far in the distance, but I believe that the light is there. We individually need to devote more time to an intensive study of this subject that we do not miss the opportunity to better serve humanity.

CONCLUSIONS

That biological preparations incude many specific remedies, many agents for prolonging life, many therapeutic aids of proven value and many valuable diagnostic agents.

That this branch of medical science while yet in its infancy has accomplished much and gives brilliant promise for the future.

That neither over-enthusiasm nor obstructive skepticism constitute the proper attiture toward these preparations but rather that an open mind is necessary to render available the accomplishments of the present or to evaluate the possibilities of the future.

DISCUSSION.

Dr. Darrington (Yazoo City): I am sure we have all greatly enjoyed and profited by this paper from our visitor from New Orleans, and it is our great pleasure to have here this afternoon another very distinguished man from the city of New Orleans, a man who is professor of medicine in the greatest university that there is in the United States, and you all know, of course, that I refer to Tulane University. He is not only professor of medicine, but editor of the New Orleans Medical Journal, in which we are all particularly interested, and we would be delighted to hear him enter into a discussion of this paper—Dr. J. H. Musser of New Orleans.

Dr. J. H. Musser (New Orleans): I appreciate very much indeed the very complimentary words you said about me, particularly the most complimentary words about Tulane. The paper of Dr. Bethea is very interesting and filled with some very important consideration, indeed. I was particularly glad to hear Dr. Bethea call attention to the fact that most of the so-called biological products are comparatively of little value. He enumerated those which are of value. When you think of the claims made by manufacturers you can appreciate indeed that their use is far from important. I met with an opportunity of using biological products rather extensively the last few years. It happens that I have charge of the contagious disease ward in the Charity Hospital, and practically all of our cases are cases of disease which can be treated by biological products. The use of the diphtheria anti-toxin needs no reiteration. The results we get are magnificent, but the last three years I have charge of that particular ward, we have had but one death from diphtheria, which was not of the laryngeal type. That patient came in with far-advanced diphtheria and it was a horrible picture—she was practically moribund when she came in.

We have had excellent results with our scarlet fever anti-toxin. After the third day we have practically no results at all, but when the children get in early, I can assure you the result is almost miraculous. In a comparatively few hours the urine will start to clear up, fever will go down fast and the patient is to all intents and purposes well. Now that may be because scarlet fever the last few years has been very mild. We have had a few severe cases that have come along, and we have had the same results.

We have also been using persistently anti-toxin against erysipelas and here again it has very excellent results, indeed. We have given this intra-muscularly and we also give it intra-cutaneously along the margin of the spreading rash. By doing this we put a block as it were up because the lesions of erysipelas are confined entirely to the skin, which stops the advancing rash, and we have worked with it extensively and in cases in which the rash is not affected by the serum—the anti-toxin—we have been able to stop it with this so-called blocking.

Dr. Bethea covered practically all of the types of biological products. Incidentally in the discussion of tuberculosis just a few minutes ago the thought came to me that it might be of some interest to tell a word or too about the so-called BCG vaccine which Dr. Calmette is using as a a prophylaxis against tuberculosis. As you know, possibly, Dr. Calmette, after working a great many years has been able to attenuate tubercular bacilli, which were previously inocuous and which can be given to children by the mouth without any ill results whatsoever. I think it is eleven years he has spent in attenuating this particular organism. And now the question has come up, as a result of these statistics in New Orleans where there are a great many doctors of French extraction, who are naturally very much interested, as to the particular value of this product and whether it will be worth while trying out on the community. Dr. Calmette's figures are astounding and the figures which have come from other countries are also very remarkable, indeed. This vaccine is given wholly to new-born children of tubercular mothers a day or two after birth to prevent it appearing. I had the opportunity last week of talking with three or four men in this country who are primarily interested in tuberculosis—Dr. Krause, Dr. Duvall Smith and one or two others, and got their opinions about this practice, In our discussions at the New Orleans parish meeting we discussed the use of this particular vaccine. We were more or less enthusiastic about it, some of us, while others of us were rather opposed to it because after all you are feeding living tubercular bacilli to your children. I asked these particular gentlemen of their conception of it, and they felt that they were really unfavorable to it. As Dr. Paul Lewis, who is at Princeton in the Rockefeller Foundation there, says, "You can give it to your children if you want to." That is a stock answer to any question, and he further said, "Certainly I would not give it to mine."

Furthermore, the figures of Dr. Calmette could not be counted on because they were ostensibly

given in a group of patients who were not under special form of observation; nevertheless, those patients were sufficiently under observation to go to the clinics and to bring their children so that they were so considered cases, and that was the opinion of Dr. Kraus, who was at Saranac, and Dr. Duvall Smith. I want to thank you very much, gentlemen, for asking me to speak.

Dr. Seale Harris (Birmingham): I was particularly glad to note the conservative discussion of Dr. Bethea regarding biological products, because I know of nothing in medicine about which there is more poetry and less truth than the data which is given to the profession by some biological manufacturers. I think we ought to go very slowly in using any biological product without knowing that the product we are using is from a reliable house, and that it can be depended upon to do what is claimed for it.

I have been much interested, and rather depressed in a way, to see the number of products that have been put on the market by grasping pharmaceutical manufacturers to take the place of insulin in the treatment of diabetis. The claims of most of them are without any foundation in fact, and yet they are being used by gullible physicians. These same pharmaceutical houses are spreading propaganda against the use of insulin. There is no more danger in using insulin than there is in using quinin. There is not a case on record that I know of with fatal effects from using insulin. The propaganda that once you use insulin you have to use it always keeps many diabetics away from reputable doctors; I would say that, in a majority of cases in which insulin is used, after it has rested the pancreas and the function of the islet cells are restored, the insulin may be discontinued. One of these very much advertised pancreatic extracts was investigated by Banting, who took a handful of the tablets and made it into an emulsion and injected it into the veins of a dog and it has absolutely no effect on the blood sugar of the dog. Of course, it is some trouble to use insulin. Diabetics are hopeful that something to take the place of insulin can be found which can be taken by mouth instead of being given hypodermically. There is a new preparation, synthelin, that has been given internally, and in old chronic cases it does have some effect in holding down the sugar, but it causes gastro- intestinal disturbances and it is thought that it produces deleterious changes in the liver. We have used it but found that in some cases it produces nausea and diarrhea. Synthelin, however, is still in the experimental stage and is not on the market at this time. We are also using myrtillip in selected cases with better results than from synthelin. The diabetic must learn, however, that whatever he uses his diet must be regulated, and that up to this time the use of insulin offers the only hope of health and life to the severe case of diabetes.

Dr. O. W. Bethea (closing): I would just like to express again my appreciation of the privilege of being with you and thank Dr. Musser and Dr. Harris for their kindly discussion.

ECTOPIC PREGNANCY.*

E. C. PARKER, M. D.,

GULFPORT, MISS.

Until 1883, ectopic pregnancy was of interest chiefly from a pathological standpoint, few if any cases were recognized clinically, but in 1883 Sir Lawson Tait did his first operation on ruptured tubal pregnancy. In 1876, Hennig said that the disease was so rare that directors of large obstetrical clinics might never see a case. In 1876, Parry was only able to collect 500 cases that had been reported. But in 1892,, Schienk collected 610 cases which had been reported in the five years previous.

Ectopic gestation may develop in the ovary or any portion of the Fallopian tube, and is then referred to as ovarian or tubal pregnancy, respectively; again, the condition may occur in the rudimentary horn of a malformed uterus, hence the term "extra-uterine pregnancy," so frequently employed, does not cover all cases. Primary abdominal pregnancy is also included in the definition, but it is extremely doubtful whether this ever occurs, although alleged authentic cases have been reported; despite trustworthy reports it is still open to doubt if we ever have development of a primary gestation in the abdominal cavity.

Ectopic pregnancy is not a rare condition and is frequently overlooked. Werth in 3600 cases (gynecological) reports 120 or 3.3 per cent; G. F. Blackmar in 3458 cases admitted to University College Hospital, London, states there were 95 cases of tubal pregnancy, or 2.7 per cent; Schumann in studying births reported to the

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Bureau of Vital Statistics of Philadelphia found in one year 56441 intra-uterine pregnancies, and for the same period he found reported in the hospitals of Philadelphia 186 ectopics, making a ratio of one ectopic to every 304 intra-uterine pregnancies.

Extra-uterine pregnancy was first mentioned by Abbicasis in the tenth century. In 1626 Riolan refers to several cases. De Lee says that the actual causes are unknown, but suggests the plausibility of (1) salpingitis, (2) pelvic adhesions, (3) infantile tubes with lack of cilia, (4) external wandering of the ovum, (5) diverticula and accessory tubes, (6) decidual reaction of the tubes, (7) disease of the corpus luteum.

Bland says that anything that would impede the decent of the ovum down through the tubes might cause an ectopic pregnancy.

It is exceptional for ectopic pregnancy to occur with the first conception, it is infinitely more frequent in women who have borne one or more children and who subsequently present a history of sterility extending over a period of some years. Just what relations sterility bears is unknown, it may represent an old inflammatory lesion. A small proportion of ectopics may follow immediately or shortly after an abortion or normal labor.

Ectopic occurs in about equal number in each tube. In 742 cases reported by various authors, 373 were in the left tube and 365 in the right, and in four cases it was found to have occurred in both tubes.

PATHOLOGY.

Pathology overshadows physiology and the tendency is not to progress and live, but to destroy not only the gestation itself but also its host. Werth says "the ovum which makes its bed in the tube digs its grave as well." The mortality of untreated cases of ectopic is high, 75 to 80 per cent; but for those who receive modern surgical treatment it is only from 2 to 5 per cent. About 95 per cent of ectopics are one-sided, but occasionally both tubes may conceive concurrently or independently of each other; sometimes a tubal gestation complicates pregnancy within the other, sometimes a tubal gestation complicates pregnancy within the uterine cavity. Neugebaurer has reported 171 cases of this character. Repeated ectopics occasionally occur: Blackmar states that in 1179 patients operated on for tubal pregnancy, 44 to 2.2 per cent developed a subsequent tubal gestation. Schumann stated that 280 patients operated on for ectopic pregnancy, 134, or 47.8 per cent, subsequently developed a repeated ectopic gestation, a ratio of one ectopic to four normal pregnancies.

DIAGNOSIS.

A diagnosis of unruptured ectopic pregnancy is made largely from clinical history alone. The patient will go a few days over her time bordering on normal menstruation but with enough difference that she will notice it; she will have pains in the pelvic region, on the side of ectopic, not severe until rupture; the unnatural menstruation may last for days or even weeks. This is one condition that the physician is justified in making a tentative diagnosis from the subjective symptoms alone, but the diagnosis should be confirmed by physical examination. On inspection you will find the early signs of pregnancy locally; the vaginal mucous membrane is more or less discolored, the cervix is soft and the uterus will be slightly enlarged. Laterally to the uterus you will find a mass which is globular in shape and does not have a cystic feeling, but is tender, pushing up on the cervix gives severe pain; this has been positive in 37 out of 39 cases I have had.

When the tube ruptures the patient feels a severe pain and faintness, generally having repeated attacks of faintness and sometimes goes into temporary syncope. The temperature is subnormal, the pulse gets more rapid and weak, compressible and thready. Sometimes you see marked

air hunger and the respirations are increased. The hemoglobin and red cells will be found reduced and the leukocytes are always increased. Blood pressure is reduced and if hemorrhage is severe there is persistent pallor and the skin becomes cold and clammy. From this state of shock, fortunately the majority react. We sometimes have a rupture without severe hemorrhage which the patient thinks is abortion and is treated for it; this may go on for days or weeks, causing the formation of a hematocele. Symptoms during this period are atypical of a low grade pelvic inflammation.

I wish to report two cases that are rather unusual:

(1) Mrs. C., aged 29 years, was married at the age of 18 years. She had one child ten years ago and no other pregnancies. The family and past personal history were negative, except at the birth of child, when she had fever for about one week following. The patient was strong and well nourished. She had passed her menstrual period about ten days and then began to have pains in the pelvic region on each side and at same time to have a small amount of abnormal flow (thought she had caught cold). Two weeks later she was taken with a sudden severe pain in the lower right pelvis about the region of the right tube. A physician was called who immediately brought her to the hospital and called me stating he had a case of ruptured right tubal pregnancy. I confirmed his diagnosis and could also feel a tumor in the left tube resembling a tubal pregnancy and made a diagnosis of a possible double tubal pregnancy. On opening the peritoneum, free blood (about one pint) was found. The ruptured right tube was clamped and removed; it contained a fetus about half way out. Then we picked up the left tube and found an unruptured tubal pregnancy there; that tube was also removed. We noticed that the uterus looked like a beginning pregnancy, but thought that probably this was due to the bilateral tubal pregnancy. On the fifth day after operation, the patient aborted a six weeks pregnancy. This is the only case that I know of a triple pregnancy, one in each tube and the uterus at the same time. The patient made a normal recovery in about two weeks.

(2) Mrs. H., aged 27 years, white, had been married for five years, with no pregnancies. She had the usual amenorrhea, disturbed menstruation, and had some pain in the lower right pelvic region, but did not consult a physician. She was at the table eating her noonday meal when the pain struck her so severely that she screamed with pain and could not get up out of her chair. A physician was called who administered morphin, gr. ¼, hypodermatically, and in 20 minutes repeated the hypodermic. The patient was in shock. The ambulance was called and the patient taken to the hospital. A physician phoned me to meet them at the hospital. Upon arriving the patient was pale and almost waxen in color, the skin was cold and clammy, radial pulse imperceptible. The patient was carried to the operating room immediately and prepared as rapidly as possible for operation. Atropin sulph. gr. 1/100 was given hypodermatically and a hypodermoclysis of normal saline started. With novocaine locally and a very few drops of ether, the abdomen was opened and a bleeding tube clamped. An enormous quantity of free blood was found in the peritoneal cavity. The abdomen was cleared of blood, and the right tube with a fetus half way out was removed. The abdomen was then closed in the usual manner. The patient had a rather stormy recovery for four days, stayed in the hospital for 16 days and was discharged cured. Two years and eleven months after this the patient began with the same symptoms as at first. I was called as soon as she and her husband recognized the symptoms, and from the history and close examination made a diagnosis of an ectopic in the left tube. The tube with its contents were removed and the patient was able to return to her home ten miles distant on the eighth day. This is one of the unusual cases, as the patient was a primipara and there were no intervening pregnancies between the ectopics.

DISCUSSION.

Dr. R. H. Foster (Laurel): I enjoyed this paper very much. There is hardly anything to add, except one or two points, and one is to give pituitrin before you operate. I have tried it out and I find it works nicely. It will prevent a great loss of blood if you have active bleeding. I know some of you disagree with me, but if you have active bleeding it seems to have a good effect on the bleeding from the tubes as well as the uterus. My attention was called to this by a professor of obstetrics of Cincinnati, and since then I have been using pituitrin and we do not have much trouble with the bleeding.

Dr. V. B. Philpot (Houston): A few years ago I reported a series of 15 cases of tubular pregnancy that I operated on over a period of several years, and the striking feature of nearly all of these cases or at least three-fourths of them was that they had ruptured quite a good while before the operation. I do not think there were over three or four that we had that were

operated before rupture. I notice the authorities all state that it is very essential to operate immediately after rupture, otherwise you are pretty sure to have a death. Well, that hasn't been my experience. I think I lost in this series only two, and as I say most of them were old ruptures, and it causes me to believe that probably it is better to treat these patients conservatively, especially if you do not have them accessible to the hospital. Treat them as you are treating other cases of shock. Keep them absolutely quiet and give them morphin. Practically all of them will overcome, I believe, the immediate danger of a rupture if they are let alone at the time. Of course, I do not mean if they are in the hospital or very close to one, but the majority of them are not. I just wanted to bring out that point.

REVIEWS

SUPERFICIAL INFECTIONS*

ALTON OCHSNER, M. D.,†

NEW ORLEANS.

(PART II)

In addition to the previously described local infections, it is essential to consider an infection of the face as a separate entity. As emphasized recently by Martin[52], Hinton[53], Wheeler[54], and Price,[55], infections of the face, especially those in the so-called "critical area" are especially dangerous because of the peculiar anatomy of the part. These peculiarities are: (1), the skin of the lip is very adherent to the underlying muscle; (2), in the lip there is no connective tissue; (3), there are rich venous plexuses, both superficial and deep, in close contact with the lip; (4) the facial vein which drains this area is flaccid, does not collapse easily, and has no values (5) the facial vein communicates with the cavernous sinus by superficial anastomoses, i.e., the angular, supra-orbital, and opthalmic veins, and by deep tributaries, the pterygoid plexus which passes through the foramen lacerum and foramen ovale.

The critical area of the face, as described by Hinton[53], extends "between the hairline of the forehead above and the chin below with two parallel lines connecting this area at the outer border of the orbit on each side." According to Dixon[56], there are four factors responsible for the serious complications resulting from infections in this area: (1) The frequent and early trauma. Individuals with a furuncle or pimple on the lip are very prone to traumatize it by squeezing it; (2), the absence of subcutaneous fat of the lip; (3), the active muscular supply of the lip. Physiological rest in infections of the lip means avoidance of all talking, as well as chewing. The muscles of the lip exert a pumping action on the venous radicles of the labial plexus, aiding in the forcing of the infected thrombi into the facial vein; (4), the inability of the veins which drain this region to collapse. Because of the possibility of extension of the process into the cavernous sinus, with a resulting sinus thrombosis, the prognosis is especially bad. Hofman,[57] in 102 cases of furuncles of the face treated in Bier's clinic, reported a mortality of 8.2 per cent. In one-third of the fatal cases the process was located on the upper lip. Dittrich[58] reported 88 cases of furuncles of the face, of which nearly 50 per cent were of the upper lip with a mortality of 10 per cent. Morian[59] reported 103 cases of infections of the face treated in Payr's clinic, 10.7 per cent of the cases ending fatally.

Ultra conservative treatment is indicated in all infections of the face, especially those of the upper lip. In contrast to the treatment of infections elsewhere in the body, early incisions, as well as any manipulative procedures, are strictly contra-indicated. Absolute rest of the part is indicated, prohibiting the patient to talk or chew food. The application of hot moist dressings favors localization. If liquifac-

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tion occurs, a small incision may be made. Of Dittrich's[58] cases, 40 cases of carbuncle of the upper lip were treated by incision, with a mortality of 13.6 per cent, whereas in 18 treated conservatively there was a mortality of 5.5 per cent. Friedmann[60] advises the use of Bier's hyperemia in cases of malignant furuncles of the face. An elastic band is applied the neck, producing slight pressure over the jugular veins for a period of 22 hours daily. In 24 cases in which this therapy was employed there were 18 in which there was no sepsis, all patients recovered. Of 6 cases in which there was an associated septicemia, three recovered. Because of the danger of the infection from a carbuncle of the lip extending up into the cavernous sinus through the angular vein, Bailey[61] advocates ligation of the angular vein as a preventative measure.

LYMPHANGITIS.

Lymphangitis is a streptococcic infection of the cutaneous lymph channels. Lymphangitis usually follows some cutaneous wound. The original wound is often insignificant, and may not be noticed. Injuries such as an abrasion, pin prick, or blister are frequently forerunners of lymphangitis. The condition is characterized clinically by the presence of small red lines extending from the original wound to the regional lymph nodes. Pathologically[11] the process is not limited to the lymph channel alone, but there is always an associated perilymphangitis which produces the characteristic red lines. The reaction in the majority of instances is caused by bacterial toxins and not by the organisms themselves. This condition is often termed tubular lymphangitits in contradistinction to the capillary lymphangitis of erysipelas. Kanavel[62] divides acute tubular lymphangitis into four types: Type I is that in which all objective evidences and systemic reaction disappear in from 24 to 48 hours. Type II—Lymphangitis with minor local complications. The sypmtoms subside more slowly, resulting in an abscess at the site of the original wound or in the regional gland. The systemic symptoms are mild. Type III—Acute lymphangitis with serious local complications. The patient is very ill, has severe pain locally, and develops local complications, such as tendon sheath infections and deep abscesses. Type IV—Acute lymphangitis with systemic involvement. There is little evidence of local reaction, an overwhelming toxema is present, and the patient succumbs.

From this classification it can be seen that the clinical picture in lymphangitis may vary considerably. Characteristically, however, the condition is usually associated with more or less toxemia.

The treatment of acute lymphangitis is, first, prophylactic. All apparently insignificant and trivial wounds should be considered as potention causes of lymphangitis. Sterile dressings should be applied. The active treatment of lymphangitis is ultra conservative. The patient should be in bed. The affected member should be immobilized, as movement favors lymphatic circulation. The extremity should be covered with a large moist hot dressing, extending proximally as far as possible. The solution employed is immaterial; preferably it should be hypertonic to prevent maceration of the skin. Those most frequently employed are solutions of boric acid, magnesium sulphate (10-20 per cent),[63] and sodium chloride. As the patient is suffering from a toxemia, in addition to this local process, large amounts of fluid should be administered. Incision is seldom indicated and only when pus is present.

ERYSIPELAS.

Erysipelas is an inflammation of the cutaneous capillary lymphatics, together with the other cutaneous structures, produced by a specific micro-organism. Fehleisen,[3] in 1883, isolated a streptococcus from a patient with erysipelas. With this organism he inoculated his own skin and produced typical erysipelas. Birkhaug[4] has demonstrated that 91.2 per cent of the

strains of streptococci found in erysipelas belong in one group. Erysipelas occurs infrequently on the extremities, but usually on the face. The condition is characterized by a local inflammatory cutaneous lesion associated with definite systemic reaction. The degree of systemic reaction varies with the condition and the age of the patient. The more debilitated and the weaker the patient the more severe the systemic reaction will be. Locally erysipelas is characterized by an intense progressive reaction. The involved area is of a bright red color, the edge of which is slightly raised. The lesion is progressive and fades in the center as it extends peripherally. Milian[64] emphasized that the maximum pain, tenderness, redness, and swelling was found at the periphery of the lesion instead of at the origin. This he termed "the law of centrifugal maximum." Because the infection is limited to the skin, it may involve certain areas not involved by subcutaneous infections, such as the ear, which contains no subcutaneous tissue.[64] Bleb formation frequently occurs.

Erysipelas is a self-limited disease; all individuals recover provided they do not succumb to the toxemia. The condition is especially prone to recur. Numerous types of therapy have been advocated, yielding indifferent results. It is apparently immaterial what substances are employed locally. Because of the intense pain, wet dressings with hypertonic magnesium sulphate solution are of benefit. The toxemia should be treated by the administration of fluids.

Birkhaug,[4] in 1926, reported the results obtained by treating 60 erysipelas patients with a specific serum. The serum was prepared according to the technic of Doulez.[65] In all cases there was a rapid improvement, as evidenced by decrease in the "toxic depression, critical drop in temperature and pulse rate, prompt fading of the erysipelatous lesions, and rapid absorption of the blebs and edema within the affected areas." Similar results are reported by Singer and Kaplan,[66] Symmers and Lewis,[67] Allan and Wilder,[68] and Musser.[69] In contrast to these favorable reports McCann[70] found that the experience with the antitoxin at the University of Rochester was not favorable. He criticises the previous reporters for not controlling their series of cases sufficiently. If the antitoxin is to be of any value, it must be administered early.

ERYSIPELOID.

As the name implies, erysipeloid is an erysipelas-like condition affecting principally the extremities. The condition is, in all probability, due to a specific micro-organisms. In 1873 Baker[71] described what is probably now known as erysipeloid under the name of erythema serpens. To Rosenbach[72] belongs the credit, however, for first isolating the specific organism from the lesions and for giving the name erysipeloid to the condition. The specific organism was found to be the same as that found in swine erysipelas, which Rosenbach[73] isolated and reported in 1909. This organism he termed Erysipeloid-porci-Rosenbach. In 1904 Gilchrist[74] reported 329 cases of erysipeloid, of which 323 were caused by crab bites or lesions produced by crabs. The disease is characterized by "slowly progressing, sharply defined, slightly elevated, dark, violaceous, almost livid red zones which developed around the site of inoculation."[75]

Etiology: The organism is the same as that responsible for swine erysipelas. It is pleomorphic, and may appear as coccoid bodies or a straight or slightly curved rod. It is gram positive. Erysipeloid is the human type of swine erysipelas, although Klauder, and his co-workers, attempt to differentiate between the so-called erysipeloid and the human type of swine erysipelas. The condition is found practically only on the hand; a few instances of the condition occurring on the feet have been reported. It is found on the hands of cooks, butchers, and of those who handle meats, fish, and hogs. The incubation period various from one to five days. The eruption which be-

gins usually at the site of inoculation is accompanied by a sensation of burning, pricking, or itching, without any constitutional symptoms and, characteristically, without the involvement of the lymphatics or lymph glands. It is most frequently encountered during the months from May to September. The erythema is of a purplish red color in contrast to the bright red color of erysipelas. Klauder[76] differentiates between the clinical condition, swine erysipelas in man, and erysipeloid. The symptoms are similar, except that in the former the symptoms are much more severe. The swelling is greater. The itching, burning, and pain are more severe, and lymphangitis, as well as glandular enlargement, are usually present. In cases of swine erysipelas there is usually a history of contact with hogs. Klauder, Righter, and Harkins report 1000 cases of erysipeloid among commercial fishermen. "At the site of inoculation swelling and a characteristic purplish red erythema appears, which progresses, involving one or more fingers, the palm, or the dorsum of the hand. Pain is a conspicuous symptom. It appears early. It is severe, deepseated, and accompanied by constant throbbing, incapacitating and sleep preventing. Lymphangitis, enlargement and tenderness of the regional lymph nodes are common, and appear early. The lymph nodes, however, do not suppurate. On deep incision at the site of inoculation a drop of pus may exude. The constitutional symptoms, fever, headaches, and malaise are invariably present during the first twenty-four hours. Some of these symptoms persist for a few days or longer, at times becoming so marked as to incapacitate the patient."

The prognosis in all types of erysipeloid, even the severe, as that described by Klauder and his co-workers, and in the swine erysipelas in man, is good as far as life is concerned. The disease is usually self-limited after two to four weeks.

The treatment of erysipeloid is very unsatisfactory, as far as local treatment is concerned. Very few results have been obtained by treating the local lesion. Fatal cases of acute septicemic form have been reported occurring in veterinarians.[77] [78] The importance of the condition is well understood when one considers that Klauder and his co-workers state that it is the chief cause of disability among fishermen who work in fish towns and who handle live, salt water fish. The specific treatment of this condition is very satisfactory. In the European clinics a specific serum has been prepared, and the results obtained from its use are very gratifying. A similar serum is obtainable in the United States.[75] According to Klauder and his co-workers[76] an injection of 25 c.c. of the serum causes a prompt disappearance of all symptoms.

TULAREMIA.

Tularemia is a specific septicemia with certain cutaneous manifestations. Because of these cutaneous manifestations this condition will be considered briefly at this point. Tularemia is especially interesting to Americans, because it is the only disease which was first described, its causative agent isolated, and its mode of transmission determined in America. Those interested in the history of tularemia are referred to a summary by Francis.[79] The specific organism is Bacterium Tularense. There are a number of carriers of this organism among the lower animals, the most important of which is the rabbit. This is by far the greatest resevoir as a source of human infections. Others are ticks, squirrels, deer flies, and birds.[80] The condition occurs primarily in animals as a bacteremia and secondarily in man as a result of bites of infected flies or ticks, or as a contamination of the hands with body fluids or internal organs of animals which are infected. One case in which the organism was transmitted from man to man was reported by Harris.[81] From an analysis of 407 cases of tularemia Francis divides the condition into four clinical types:

1. Ulcero-glandular, the primary lesion being a papule, later an ulcer, which is accompanied by an enlargement of the regional lymph nodes; there are 272 cases in this group.
2. Occulo-glandular, the primary lesion being a conjunctivities and accompanied by an enlargement of the regional lymph nodes; 25 cases.
3. Glandular. The primary lesion is relatively insignificant, the enlargement of regional lymph nodes being most important; 16 cases.
4. Typhoid, without primary lesion and without glandular enlargement; 24 cases.

Of surgical interest are the cutaneous manifestations, especially the ulcer which develops at the site of inoculation. Here a small papule forms which later becomes ulcerated. There is early an associated enlargement of the regional lymph nodes. According to Netherton,[82] characteristically there are subcutaneous nodules along the course of the lymphatics extending from the initial ulcer up to the regional gland. The condition is very apt to be confused with sporotricosis. The onset of the disease is sudden, characterized by fever, headaches, vomiting, chillness, general aching, sweating, and prostration. The fever is intermittent and lasts from two to three weeks. In the ulcero-glandular type the patient usually complains, as a rule within eight hours, of pain in the regional lymph nodes. This may precede any evidence of reaction at the site of the inoculation.[83] According to Pinkerton and Markwith,[83] in about one-half the cases the lymph glands suppurate. Lymph glands, other than regional lymph glands, located in other parts of the body may be enlarged. The diagnosis of the condition is usually not difficult. Almost invariably there is a history of the patient's having handled some wild animal, especially rabbits. Following this, pain develops in the regional lymph nodes, which, in turn, is followed by the development of a papule at the site of inoculation. This latter becomes necrotic and sloughs. The local lesion is accompanied by signs and symptoms of a general systemic infection, which makes the diagnosis relatively easy. A diagnosis should not be made, however, until agglutination tests are positive. The agglutination should not be attempted in every laboratory, because of the extreme danger of transmission of the disease to laboratory workers. Francis and others have emphasized that the organism may penetrate the unbroken skin. That the condition is not a rare one is shown by a report by Simpson[84] in which he states that 613 authentic reported cases had been collected up to May 1st, 1928. Of these 614 cases there were 25 deaths, a mortality of 3.7 per cent. There is considerable difference of opinion among authorities concerning the manner in which the local lesion should be treated. Simpson believes that incision and drainage of suppurating masses is the method of choice. Kavanaugh,[85] on the other hand, believes that the infected gland should be treated conservatively. The general measures employed in treating the patient should be the same as those use in typhoid fever. Rest in bed for weeks is essential, and often several months elapse before the patient is able to resume work.

ANTHRAX.

Anthrax is an organism which is found frequently in the blood of many domestic, especially herbivorous, animals (cattle, sheep, horses, pigs, and goats). The organisms are spore forming, and after the death of the animal the blood or body fluids may contaminate the hide. The micro-organisms may remain as spores for years, and still be viable. The organisms may gain entrance to the body through the unbroken skin. The two types of anthrax are differentiated clinically. The first is that in which the lesion is localized in the skin, and is spoken of as a malignant pustule; the second is the internal type of anthrax, which is a septicemia and which

is almost invariably fatal. The malignant pustule is quite characteristic, and consists of a red area covered by a vesicle, the center of which is black and necrotic. Surrounding this lesion is a soft edema. As the lesion enlarges the necrosis in the center it becomes larger and numerous vesicles appear around the edge. The area of redness and induration increases.[11] The necrotic center then drops out in the benign cases in from four to nine days. In the severe cases the induration, and especially the edema, progresses, and a septicemia results, producing the death of the individual.

Pathologically the lesion differs from the ordinary pyogenic organism in that the reaction of the tissues is less marked in the former, the serum is poorer in leukocytes, and there is no marked liquifaction of tissue by the tryptic ferments set free by destroyed leukocytes.

The diagnosis of anthrax is made by finding the characteristic organisms in the discharge from the lesions. The lesions are highly infective and should be treated with caution. The treatment of anthrax consists of wide excision of the pustule, especially in those cases in which there is extensive edema. The use of the specific serum, Sclavo's serum, has given beneficial results. Recently Boggon reported 4 cases of anthrax treated with Sclavo's serum. In all four cases a very satisfactory recovery was obtained. Boggon[86] stresses the character of the early lesion, which differs considerably from that which is usually described in textbooks. He states that the lesions in the cases which he treated could only be distinguished clinically from a septic spot by the history of exposure, the dark center, and the area of whiteness immediately around it. The serum was administered into the gluteal region. The largest dose given in any particular case was 110 c.c. and the least 60 c.c. The initial dose was between 20 to 40 c.c., and doses were given, on subsequent days, of 20 to 30 c.c. Within two to three days the lesion had completely disappeared. If the serum treatment is to be employed, it should be employed early, as well illustrated in a fatal case reported in the Weekly Public Health Bulletin, of New York,[87] in which serum was used relatively late.

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ETIOLOGY OF BERIBERI.—The results of experiments made by S. Matsumura, G. Kakinuma, K. Kawashima, K. Tanikawa, S. Ochiai, R. Miyata, K. Fujisaki, R. Kanao, K. Noguchi, K. Aoki, T. Sato, K. Ito and M. Suzuki, Chiba, Japan, on animals seem to prove that the beriberi bacillus should be judged the principal etiologic factor in experimental beriberi. A deficient diet, consisting of polished rice, seems to be merely a factor that constitutes a disposition to the disease. The feces of a series of patients with beriberi in several countries were examined for the beriberi bacillus. In ninety-eight subjects, or 74 per cent, the beriberi bacillus was present in the feces. The feces of a group of patients from the Chiba University Hospital, and the Chiba Military Hospital, none of whom had beriberi, revealed an incidence of about 1 per cent. In 400 soldiers of the First Regiment of Chiba a like incidence was found. A general examination of the feces of 2,103 inhabitants of the town of Narita, in the Chiba prefecture, was made as a further control. The period selected was from December, 1927, to January, 1928. From these speciments, 101 cultures of red colonies on saccharose plates were obtained. These cultures were tested with a specific serum, and only eighteen showed a positive agglutination. This is about 1 per cent of the total number of cases studied bacteriologically, and agrees very well with the results of the examination of the patients in the hospitals and the soldiers of Chiba. It will be seen that the incidence of the beriberi bacillus, therefore, among persons without beriberi is about 1 per cent. This is about the percentage of carriers of intestinal pathogenic bacteria in general. Fowls with beriberi were found to have developed specific agglutinations of considerable potency; usually titers of from 200 to 500 were obtained. If the disease were reinduced, after an initial recovery, the titer not infrequently rose to a higher value—1:1,000, or even more. Agglutination tests performed on thirty consecutive patients with beriberi gave twenty-five, or 83 per cent, positive results. As controls for the specific agglutinations obtained in typical cases of beriberi, serums of normal persons were examined, the same organism and technic being used. Unless a positive test in a dilution of 1:50 was obtained, the result was deemed negative. Forty normal persons were thus examined, and three, or 7.5 per cent, were found positive. The authors conclude, therefore, that normal persons and experimental animals free from beriberi do not habor the specific bacillus. When the specific bacillus is fed to experimental animals, the organism becomes implanted; then the specific symptoms follow. The serum of experimentally infected animals, as well as the serum from human cases of beriberi, contains potent specific agglutinins for the beriberi bacillus.—Jour. Am. Med. Assoc., 92:1325-1327, 1929.

PEPTIC ULCER AND CANCER OF STOMACH.—J. Shelton Horsley, Richmond, Va., stresses the point that since at least one-fifth of the cases of cancer of the stomach arise from peptic ulcer, it would seem advisable to watch patients with gastric peptic ulcer with great care. He reports a case that is interesting because of the relationship between ulcer and cancer. In this case it seems improbable that a small cancerous spot had existed for fifteen years during the time of the gastric symptoms. The logical conclusion is that this microscopic area of cancer had recently arisen in the region of a gastric ulcer as a result of the irritation of the ulcer. As two acini constituted all the definite cancerous tissue found in this case, it is possible that a thorough histologic examination of gastric ulcers may show the incidence of incipient cancer greater than it is generally believed to be.—Jour. Am. Med. Assoc., 92:1813-16, 1929.

NEW ORLEANS
Medical and Surgical Journal
Established 1844

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AGAIN THE BACILLUS CALMETTE-GUERIN.

Petroff (Petroff, S. H., The Variability of the Tubercle Bacillus, New England Med. & Surg. Jour., 200:1929, 1148) would explain the apparently harmless action of the B. C. G. vaccination by invoking the phenomena of microbic dissociation. It may be pertinent to recall that the observation of this particular bacteriologic peculiarity dates from the time that the study of bacteria was begun more than fifty years ago. Later, in the eighties, largely under the influence of Koch and Cohn, fixity of type became a dogma among bacteriologists. It is only within the last few years that men like Arkwright and de Kruif, according to Petroff, studied the variabilities of microbic growth that takes place in the subculture from the original colony. At first this may be merely variation in cultural characteristics. In subsequent cultures deviations may take place in the virulence, the tinctorial properties and the biologic characteristics of the daughter organisms.

The importance of this property of microbic dissociation in relation to the tubercle bacillus, and particularly the bacillus of Calmette-Guérin, lies in the fact that apparently Calmette has dissociated from his original culture a strain of tubercle bacilli which are practically avirulent. Petroff, in a series of extensive studies, shows, however, that under certain conditions the avirulent organism (R) can be reverted to a virulent organism (S) after eight to ten passages and that the R organism, while only rarely producing progressive tuberculosis in the guinea pig, does occasionally cause active tuberculous lesions.

The gist of this experimental work is that neither you nor I would wish to have our children fed this vaccine which is so enthusiastically advocated by Parisian bacteriologists and pediatricians. If it is possible for the presumably avirulent cultures to revert back to the virulent type and if it is extremely difficult to eradicate all the virulent organisms, then the procedure must be fraught with danger. All this is said despite the continued reports from France of the value of the method.* Tubercle bacilli may linger long in the human body before exerting their pathogenic properties. Fortunately nature in the great majority of instances is capable of overcoming the hostile invaders.

BUSINESS, AND GOING GOOD.

According to the best read book in the world the great physician "went around doing good." Succeeding generations of

*Paris Letter, J. A. M. A., June 29, 1929, p. 2182.

physicians have been doing the same thing for over nineteen hundred years. The help of all doctors has always epitomized charitable actions and acts. Although there may be a tremendous spiritual satisfaction in doing good; such happiness is ephemeral at its best and does not pay for bread, shoes nor gasoline, not to mention medical books, surgical supplies of office rent to physician, much as he does of a beneficent character and much as he would like to do more, must face the realities of life. He can not live on air nor can he advance in skill and knowledge without an adequate income.

The medical man is notoriously a poor business man, and undoubtedly failure to attain sufficient and healthy yearly receipts may be attributed to unbusinesslike methods. In this connection a recent survey of the cause of failure in retail business is pertinent. Small stores failed not because of poor salesmanship, nor because of laziness, nor of general unaptitude, but they failed because of extending too much and too great credit. The physician could well take a lesson from this economic study. The average doctor earns enough, but does not collect it. He gives credit to every one and often prolonged credit. This he should not do. If patients fail to pay their bills, and an earnest effort is made to collect them without success then these debtors should be dropped from the books. The thought would be expressed, in criticism of this suggestion, that the doctor could not afford to lose these patient. If the small retail dealers, among whom competition is keener than in any other branch of business, can do this very thing, then surely the doctor can do likeliwise. Remember the most ungrateful patient is he who owes the most. It is he who will belittle and strike down his benefactor.

EXTENSION COURSES IN MEDICINE.

The form of post-graduate instruction known as an extension course has been employed in this country to an increasing extent in the past decade. Shortly after the war several distinguished Vienese specialist is visited some of the large medical centers, giving a week's course of lectures in their particular field and then moving on to the next large city. This was found so profitable to the auditors that the method of instruction spread to communities smaller than the original centers and more isolated than were these larger places. At the present time these courses, given by some authoritative specialist, under the auspices of a university, a medical school, a county medical society or a local medical group, are quite popular in certain sections of the United States.

A modification of this plan has been instituted by four states, Wisconsin, North Carolina, Kansas and Oklahoma, whereby small cities and towns are provided once a week with an instructor who lectures and demonstrates cases for a certain number of weeks. The advantages of such a course of instruction are obvious. The instructor is brought to the group. A large number of medical men may be shown in the two to three hours a week period the newer developments in medicine and reviewed in some of the older phases of the subject at an expenditure of a normal amount of time and expense, factors which would prevent the majority of a group going to some large medical center for post-graduate instruction.

The idea of group instruction in their own localities should have even a greater vogue than it has at present. It is a type of graduate study which could be very well employed throughout the South, with its relatively large number of small towns and cities, often far distant from medical contacts. It certainly offers a possibility of increasing interest in medical societies which, under some dynamic secretary, might well arrange such courses to be held weekly for eight to ten weeks during the least active periods of the year.

HOSPITAL STAFF TRANSACTIONS

VICKSBURG HOSPITAL STAFF MEETING, JUNE 6, 1929.

Abstract: Benign Tumor of Left Fibula and Tibia.—Dr. W. H. Parsons.

White male, 18 years of age. Family history and past personal history irrelevant.

C. C. Last season while playing foot ball the leg was hurt, but not sufficiently to cause him to discontinue playing. Later conscious that the left leg was slightly swollen and since the date of the injury there has been a sensation of feeling tired in the leg. Recently examined by his home physician who made a diagnosis of tumor of the bone. General examination entirely negative except for swelling over the lower third of the left leg. A remarkable vigorous young individual and in every other respect normal.

Roentgen-ray disclosed a tumor in the lower third of the fibula, which was felt to be benign. The tumor appeared to join the tibia.

Operation was done. The fibula was exposed, a Gigli saw was passed well above the tumor, the bone divided, divided also below the tumor and the fragment of fibula containing the growth was removed. The tumor was attached to the posterior surface of the tibia and it was necessary to remove the posterior half of a segment of the tibia. Recovery from surgery was uneventful.

Subsequent roentgenograms showed the tumor to have been cleanly removed.

Biopsy by Bloodgood of Baltimore, showed the condition to be benign. It was his opinion that dignosis would lie between osteomylitis Garr or exostosis, benign.

Roentgen-ray study one month after surgery showed splendid regeneration of bone and no evidence of tumor.

The history in this case, that is, of trauma occuring in a young individual and of tumor, which appeared to be growing rather rapidly, would of course strongly suggest sarcoma. The case is presented because of the comparative rarity of bone tumors and to exemplify the fact that though the history would be quite suggestive of malignancy biopsy disclosed the lesion to be undoubtedly benign.

VICKSBURG SANITARIUM AND CRAWFORD STREET HOSPITAL STAFF MEETING JULY 10, 1929.

Abstract.—Ileo-Colitis in a Child of Fourteen Months; Intraperitoneal Blood Transfusion.—Dr. L. J. Clark.

Patient—White, male, age 14 months; admitted to hospital June 22, 1929.

Complaint—Loose bowels; restlessness; fever. On set about six days before admission, and following whooping cough. Mother noticed that child became fretful and restless, and bowels became loose. Condition rapidly worse and in past 72 hours stools have contained blood and mucus; stools every 30 minutes; no vomiting. Temperature 100° to 102° F. Has been eating most anything, principally raw cow's milk.

Past History—No diseases except whooping cough.

Family History—Father, mother, two brothers, and one sister living and well.

Physical Examination—Temperature 102° F.; pulse 140, regular; respiration 28, regular. Fairly well developed but poorly nourished, apparently very ill and restless. Tongue coated; abdomen slightly distended with some generalized soreness. Otherwise, not remarkable.

Blood—Leukocytes, 22,900; Differential leukocyte count small lymphocytes, 16, large lymphocytes, 2, large mononuclears, 17, polymorph. neutrophiles, 65, of which 63 were immature forms; no malaria found. On June 24, leukocytes were 20,200, with 34 neutrophils of which 32 were immature forms. On July 4, leukocytes were 25,-500, with 77 neutrophils of which 57 were immature forms.

Feces—Repeated examinations showed some to much mucus, chemical blood, 1-plus to 3-plus; microscopic blood, rare to numerous red cells; leucocytes, rare to numerous. No amebae or dysentery bacilli were found.

Stomach washings showed chemical blood.

Course—Patient was put to bed and all food withheld except barley water and a small amount of acidophilus milk. Treatment: bismuth subnitrate, paregoric; tannic acid rectal irrigations; glucose solution subcutaneously. At first there was slight improvement but in spite of all treatment bowels were still acting five or six times a day and still contained blood. Child was rapidly wasting. A suitable blood donor was found with some difficulty and 250 cc. of blood, citrated, were given intraperitoneally. Patient at first became much distended but following gastric lavage and colon irregations, there was much improvement in 48 hours. About four days later there was slight recurrence of diarrhea and fever, which lasted one day. Has improved rapidly since and was discharged today, recovered but much emaciated. Child is now taking protein milk and some acidophilus milk as tolerated.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

During the month of July, besides the regular meeting of the Board of Directors, the second quarterly executive meeting was to have been held but because of the lack of a quorum adjourned. This was the last meeting until October, the Society going into summer recess July, August and September.

The third quarterly premium on the second annual premium of group insurance was paid on July 5, with 239 members holding policies.

An organization meeting of the Women's Auxiliary of the Orleans Parish Medical Society was held on Tuesday morning, July 9, with the thirty-one charter members enrolled. The following officers were elected:

President—Mrs. J. A. Storck.

First Vice-President—Mrs. I. I. Lemann.

Second Vice-President—Mrs. John H. Musser.

Treasurer—Mrs. Geo. J. Taquino.

Recording Secretary—Mrs. A. L. Levin.

During the past month the following doctors were elected to Active Membership:

Drs. A. F. Brock, Jr., James J. Baron, Cuthbert J. Brown, Thomas E. Clements, P. F. Wilson, Clarence P. May, A. N. Houston, Mannie Mallowitz, and W. R. Strange.

Do not fail to send in your picture for the History of the Orleans Parish Medical Society.

TREASURER'S REPORT.

Actual Book Balance, May 31, 1929	$2,260.73
Receipts for insurance	700.20
Receipts during June	412.50
	$3,373.43
Expenditures in June	$1,962.69
ACTUAL BOOK BALANCE	$1,410.74

LIBRARIAN'S REPORT

Two hundred sixty-nine books have been added to the Library during June. Of these 124 were received by gift, 124 by binding, 12 by subscription, and 9 from the New Orleans Medical and Surgical Journal. A notation of new titles of recent date is appended.

Donors for the month are as follows: Dr. W. A. Lurie, Mayo Clinic, University of Western Ontario, University of Nebraska, Rochester Academy of Medicine, and Dr. E. A. Socola.

Two hundred twenty-five volumes from our duplicate collection have been sent on permanent loan basis to the Hotel Dieu Library. This is the third hospital library in which we have placed books in this way.

NEW BOOKS

Ewing—Manual of the External Parasites, 1929.

Baylis—Manual of Helminthology, 1929.

Thompson—Protozoology, 1929.

Malloch—William Harvey, 1929.

Burke—Treatment of Venereal Diseases, 1927.

McClanahan—Pediatrichs, 1929.

Gaskell—What Is Life, 1928.

Warthin—Old Age, 1929.

Far Eastern Association of Tropical Medicine—Transactions of Eighth Congress, part 1, 1928.

Rockefeller Foundation—Methods and Problems of Education, 1928-29.

U. S. Army—Medical Department in the World War, volume 3, Finance and Supply, 1928, and volumes 10, Neuropsychiatry, 1929.

H. THEODORE SIMON, M. D.,
Secretary.

MINUTES OF ORGANIZATION MEETING OF THE WOMAN'S AUXILIARY OF THE ORLEANS PARISH MEDICAL SOCIETY HELD JULY 9, 1929.

Mrs. Oscar Dowling, President of the State Auxiliary, called the meeting to order in the absence of Mrs. Ralph Hopkins, Chairman, who was called out of the city.

Mrs. Dowling suggested that the Constitution and By-Laws of the American and Southern Woman's Auxiliaries be adopted. Upon motion by Mrs. Arthur Weber, duly seconded, the Constitution and By-Laws of the American and Southern Woman's Auxiliaries were adopted.

The Chair stated that the purpose of this organization is to promote the aims of the medical profession and to promote fellowship in the doctors' families, to assist in the entertaining of the Louisiana State Medical Society and of such others as may be desirous of our co-operation.

Upon motion a Nominating Committee was appointed as follows: Mrs. Homer Dupuy, Mrs. D. N. Silverman, Mrs. E. Denegre Martin, and Mrs. W. P. Gardiner. This committee retired from the meeting room in order to name candidates for election. After a brief recess the report of the

Nominating Committe was read, consisting of the following names:

President—Mrs. J. A. Storck.

First Vice-President—Mrs. I. I. Lemann.

Second Vice-President—Mrs. John H. Musser.

Treasurer—Mrs. Geo. J. Taquino.

Recording Secretary—Mrs. A. L. Levin.

Mrs. Weber moved that the committee's nominations be voted on as a whole. This was seconded and carried and the officers were elected.

The dues of the Auxiliary were discussed, and it was suggested that the organization adopt the same dues as the Shreveport Auxiliary—$1.25 a year. One dollar for the Parish dues and twenty-five cents for the National dues.

Mrs. Dowling stated that Mrs. Arthur Herold of Shreveport has been sent to Portland as the State's first delegate to attend the American Medical Auxiliary.

No meeting date was fixed because of the summer months, but Mrs. Storck expressed the intention of calling a meeting of the officers in the next few weeks, when a meeting date will be named.

Upon motion by Mrs. Levin the meeting adjourned.

MRS. A. L. LEVIN,
Recording Secretary.

CHARTER MEMBERS WOMAN'S AUXILIARY, ORLEANS PARISH MEDICAL SOCIETY

Mrs. E. E. Allgeyer
Mrs. S. M. Blackshear
Mrs. W. R. Buffington
Mrs. Jules M. Davidson
Mrs. Oscar Dowling
Mrs. Homer Dupuy
Mrs. Jules Dupuy
Mrs. Frederick L. Fenno
Mrs. W. P. Gardiner
Mrs. R. L. Gordon
Mrs. Amedee Granger
Mrs. J. S. Hebert
Mrs. Ralph Hopkins
Mrs. Adolph Jacobs
Mrs. Otto Joachim
Mrs. F. E. LeJeune
Mrs. A. L. Levin
Mrs. Louis Levy
Mrs. E. Denegre Martin
Mrs. Monte F. Meyer
Mrs. C. L. Peacock
Mrs. J. Frank Points
Mrs. Robert H. Potts
Mrs. S. J. Rosenthal
Mrs. P. B. Salatich
Mrs. Daniel N. Silverman
Mrs. J. A. Storck
Mrs. Geo. J. Taquino
Mrs T. J. Walshe
Mrs. H. W. E. Walther
Mrs. J. W. Warren
Mrs. Arthur Weber

The following is a brief summary of the annual receipts and expenditures of the Orleans Parish Medical Society:

REPORT OF GENERAL FUND, 1928

Balance on hand January 1, 1928	$ 485.86
Receipts	24,951.04
Expenditures	24,196.96
Actual book balance	1,239.94
Total office expenditures	178.68
Incidentals	606.27
Total Special receipts	3,068.82
Total special expenditures	9,578.43

Respectfully submitted,

JOHN A. LANFORD, M. D.,
Treasurer.

ANNUAL REPORT OF SECRETARY, 1928

In presenting this annual report of the happenings of the Society during this past year, many of the facts mentioned will be further enumerated by other officers and chairmen of various committees. I beg your indulgence in this repetition which is necessitated by your By-Laws.

1928 has seen this Society again go through one of the most active years in its history.

During the year there has been celebrated the fiftieth year of its existence, carrying o for these fifty years by educating and enlightening its members through its scientific sessions. Adequate exercises commemorating this half century anniversary were held in the past month of May.

MEMBERSHIP

The year ended with the total membership of 515, the largest membership yet reached. Of this number 487 are Active Members, 20 Associate Members, 6 Interne Members, and 2 Honorary Members. Losses during the year number 18. These were: Deaths, 4; removals, 9; resignations, 2; dropped for delinquency, 2, and dropped for unethical conduct, 1. There was a gross gain of 17 and a net increase of 12. This net increase is one of the largest increases since the year following the World War, and this fact should encourage the membership to bring in the remaining forty or fifty eligible licensed practitioners of medicne in Orleans Parish.

MEETINGS

Your Board of Directors has held eleven meetings. All of the members of the Board worked diligently in an endeavor to dispose of matters brought before them, and each and every one deserves your consideration for their attendance and their willingness to co-operate with the President and other officers.

The Society has held 17 general meetings during the year. Of this number there was the installation meeting, three quarterly executive meetings were extremely interesting. All phases of Hospital Staff, one joint clinical meeting with the U. S. Marine Hospital Staff, one joint meeting with the New Orleans Gynecological and Obstetrical Society, and one joint meeting with the Louisiana Dermatological Society. The average attendance at these meetings was 107, which is the largest average attendance in our history.

All of the clinical meetings and scientific meetings were extremely interesting. All phases of medicine and surgery and their allied specialties were dealt with.

From the scientific standpoint the Society has had a most excellent year. This I feel was due to the untiring efforts of the Scientific Essays Committee and its Chairman, Dr. I. M. Gage.

Twenty-three scientific papers were presented by the membership and five by the following guests:

Dr. R. A. Cutting of New Orleans.

Dr. W. W. Chipman of Montreal.

Dr. J. O. Polak of Brooklyn.

Dr. A. L. Glaze of Birmingham.

Dr. B. E. Denney of Carville, La.

STANFORD E. CHAILLE MEMORIAL ORATION

The third oration commemorating the memory of the illustrious and well known Dr. Stanford E. Chaille was held December 4, 1928. Dr. Carl J. Wiggers, Professor of Physiology of Western Reserve University, Cleveland, was the orator. The attendance on this occasion was excellent and was in well keeping with the auspiciousness of this oration.

The By-Laws revised in 1927 were put in printed form, each member being presented with a copy. There has been no revision of the present By-Laws.

ANNUAL BANQUET

The Society, in accordance with custom, has held its annual banquet following the closing of the voting on election day. The attendance was poor, and if the annual banquet is to be a continued custom an endeavor should be made to increase the participants, which can only be done by repeated and early circularizing the membership.

LIBRARY

There has been a correlation of the Orleans Parish Medical Society Library and the Tulane Medical School Library. Both of these libraries now function with Miss Mary Louise Marshall as Assistant Librarian and Miss Marion Billon as Miss Marshall's assistant in our own library.

This present system of library management seems very satisfactory.

New furniture in the form of reading tables and chairs has been supplied during this past year. A new reading room and a duplicate room has been added. This has increased the reading space, which is absolutely necessary.

The Board of Directors has sanctioned the Society joining the Association of Commerce for the year 1928.

Among the added equipment and facilities has been the purchase of a fire proof safe, in which the Minutes and important records and transactions of the Society are now kept.

The installation of a telephone booth, with a private line for use by the membership has been installed. A telephone on meeting nights is now placed outside of the door of this assembly room.

Two oil paintings of two illustrious past officers of this Society have been resurrected by our President, repaired and are now hanging on these walls.

COMMITTEES

During this year there has been marked activity in some of the committees.

The Hospital Abuse Committee, with its Chairman, Dr. A. E. Fossier, has been in constant contact with the new administration of Charity Hospital, and has a most interesting report, which will be read later.

The Committee on State Medicine and Legislation has had a most active year, and working in conjunction with a similar committee of the Louisiana State Medical Society it has helped in a most commendable manner at this past meeting of the Legislature.

The Publicity Committee, which has been inaugurated with the past revision of the By-Laws, has functioned actively, and has had at its disposal a paid publicity man to keep it in contact with the daily papers.

The Periodic Health Examination Committee has held its second annual "Longer Life Week" with the same marked success which witnessed the inauguration last year of this plan of periodic health examinations.

HISTORY

A history of the fifty years of existence of the Orleans Parish Medical Society has been sanctioned by the Board of Directors and has been written by one of our past Presidents, Dr. A. E. Fossier. This manuscript is practically complete and at some later date when the pictures of the membership and officers are completed will be published and presented gratis to the membership.

The Society, through its pediatric specialists, and its President, co-operated actively with the Lions Club for a "Better Babies Week," which, as we all know, was a huge success.

GROUP INSURANCE

Group insurance, begun one year ago, has proven quite a success. At present 240 members are holding policies, which is practically the same number as first originating. During the year policies were paid to the beneficiaries of two deceased members.

Miss Mary Louise Marshall, Assistant Librarian, has again been sent to the Medical Library Association meeting. Representation at this meeting is considered very valuable by the Board, and likely a delegate will be sent annually.

During the year the following Delegates and Alternates to the Louisiana State Medical Society have been elected for a term of two years:

Delegates	Alternates
Dr. S. M. Blackshear	Dr. F. M. Johns
Dr. H. B. Gessner	Dr. H. Theodore Simon
Dr. F. J. Chalaron	Dr. J. Birney Guthrie
Dr. L. L. Cazenavette	Dr. John F. Dicks
Dr. H. W. Kostmayer	Dr. Maurice J. Gelpi
Dr. E. Denegre Martin	Dr. J. T. O'Ferrall
Dr. E. L. Irwin	Dr. L. A. Fortier
Dr. P. Graffagnino	Dr. C. J. Bloom
Dr. P. A. McIlhenny	Dr W. J. Durel
Dr. B. A. Ledbetter	Dr. Adolph Jacobs
Dr. Marcy J. Lyons	Dr. Muir Bradburn

OFFICE ORGANIZATION

The work in the office has increased considerably owing to the detail work of collecting and paying the premiums of the group insurance, and also on account of the many circular letters sent to the membership notifying them of routine matters.

I wish to extend my sincere thanks to Miss Lucille Maier, our Assistant Secretary-Treasurer, for her faithfulness and promptness in her endeavors to co-operate.

I wish to thank the President and each member of the Board of Directors for their hearty co-operation, and in conclusion I express my gratitude to the general membership for the opportunity they have given me to serve the Society.

Respectfully submitted,

H. THEODORE SIMON, M. D.,
Secretary.

INAUGURAL ADDRESS OF PRESIDENT DR. ERASMUS DARWIN FENNER

Mr. President, Members of the Society, and Ladies and Gentlemen:

To have been elected to the presidency of this Society, without opposition, and therefore by general consent, is a tribute of amiability and friendship on the part of its members for which I cannot but be deeply grateful. It is the sort of thing that warms the cockles of the heart, and makes the recipient feel that he must do something to show that he is not unworthy of the generous kindliness of the friends who have shown themselves to be more numerous than he, perhaps, had realized.

Organized just half a century ago, in 1878, at a time when two rival medical societies had been leading a hostile, precarious and anaemic existence, it succeeded in fusing the two groups, and has slowly, but surely, gathered to its heart the great majority of the ambitious and representative doctors of our city. It welcomes all fit and worthy men, and rejoices over each accession from the minority who still remain outside the fold.

Closely affiliated with the American Medical Association, and the Louisiana State Medical Society, the Orleans Parish Medical Society stands for Organized Medicine in this city. And organized Medicine, Ladies and Gentlemen, is a fine force and a real civic asset in any community. It is, in fact, the original Endeavor Society—endeavoring always to mitigate suffering, to prolong life and to prevent disease, as well as to cure it, by searching for its causes, by learning how to combat or to remove them, and by educating the public in methods of self protection.

Whatever may be the weaknesses and failings of the individual physician, the medical profession as a whole, since the days when Hippocrates imposed the famous Oath, one of whose clauses

affiirmed that "Into whatever houses I enter I will go for the advantage of the sick, and will abstain from every voluntary act of mischief or corruption," stands, and has always stood, for utter disregard of personal convenience, comfort or safety; for complete devotion to the wellfare of the sick; for a tireless search for methods to control and prevent sickness.

New methods of treatment, new pharmaceutical products, discoveries of the causes of infections, are being constantly announced by one or another of the army of doctors throughout the world, and are eagerly tested out. Too often the enthusiastic claims of the originators fall before the critical investigations, and accumlated experience of others. Frequently revision results in a real gain. The keynote of modern medical effort, however, is prophylaxis—the prevention of disease. And to prevent disease we must first know its cause. Given this knowledge, the discovery of a cure is brought appreciably nearer.

Political historian record with singular pleasure the achievements of the great captains and conquerers of the world—Darius, Hannibal, Julius Ceasar, Napoleon. But to satisfy their lust for power, and to perpetuate their fame, how many countless thousands laid down their lives? And death is the conquerer, in the last analysis, against whom mankind has been vainly fighting throughout the centuries. The fear of death is universal. No matter how wretched his existence, the average man struggles to prolong it. Philosophers, and religious teachers of every creed, have sought to find a formula which would mitigate the dread with which the entry to "that undiscovered country from which no traveler returns" is always viewed. The Christian consoles himself with the thought of Paradise; the Mohamedian by picturing a heaven graced by houris; the Stoics of ancient times by estimating all mundane things as trivial. Marcus Arelius beautifully expresses the attitude of the Epicurean Stoic when he urges us to "Consider often how many wise physicians, who have frequently knit their brows on seeing the signs of death in their patients, are dead themselves; how many astrologers, who have ostentatiously foretold the deaths of others; how many philosophers, who have discoursed without limit upon death and immortaility; how many warriors who have slaughtered multitudes; how many tyrants who have exercised their power of life and death arrogantly, as though they themselves were immortals; nay, how many whole cities, if I may so speak, have died-Helice, Pompeii, Herculaneum, and others innumerable."

"Then think over those you have known, one by one; how one buried another, and was in turn buried by a third; and all this in so short a time."

"In brief, look at all things, and see how cheap and ephemeral they are—but yesterday a bit of mucous, tomorrow a mummy or ashes. Spend this brief moment of time as Nature dictates, and then depart, just as the olive falls when it is ripe, blessing the Nature that begot it, and thankful to the tree upon which it hung."

In contrast to this fatalistic attitude is the constant struggle of the physician to prolong life. The medical hisorian delights to honor the memories of those great men, the product of whose indefatigable industry and scientific curiosity had resulted in so much benefit to mankind—that bold pioneer, Edward Jenner, who gave the world vaccination against smallpox; Harvey, who demonstrated the circulation of the blood; John Hunter, who did so many useful things; Pasteur, whose work upon fermentation, while he was seeking a cure for the blight upon the vineyards of France laid the foundation for the whole modern system of bacteriology, and directed the energies of the immortal Lister to the introduction of antiseptic surgery; our own Marion Simms, the father of gynecology; Kock, who discovered the true cause of the "white plague," tuberculosis; Klebs and Loeffler, who taught us the cause of diphtheria; Noguchi, Carroll, Ried, and the other members of the commission which solved the problem of Yellow Fever; these, and many others, are creditors to whom mankind can never pay its debt.

In casting up the account of the innumerable multitudes whose lives have been saved as a result of the activities and self sacrifice of its investigators, is it any wonder that the medical profession should be proud of its past, proud of its present and prouder still of its hopeful future? Modern medical research has expanded the field to such an extent that it is too much for any ordinary mind—hence the specialism of today. But the currents of these special investigators all flow into the common pool of medical knowledge, and are assimilated and coordinated there for the general good.

In this era of marvels, when the telegraph, the telephone, the phonograph, radio, the aeroplane, have become so commonplace that they arouse no special wonder, the rending of the veil of mystery which shrouded the causation of diseases like Yellow Fever, tuberculosis, typhoid fever, the Asiatic plague, syphilis, the African sleeping sickness, diphtheria, scarlet fever, and even measles (it seems likely), is accepted without excitement as to be expected. But with the discovery of their casues has come the understanding of how to prevent them. Yellow Fever, whose dread epidemics were the terror of this whole section, has been practically eliminated from our midst; typhoid fever, which in days gone by killed more soldiers than the bullets of the enemy, has become a

trivial factor in the sick roll of properly regulated camps; vaccination against small pox has put an end to the fearful visitations of this scourge; diphtheria and scarlet fever can now be prevented by prophylactic injections, and the former, at least, cured by the timely administration of antitoxin.

The reverse of this paean of triumph is found in limitations in our knowledge. We know the cause of pneumonia, we even know and recognize its four types, but we know no cure; all we can do is to assist nature in the struggle. Typhoid fever could be abolished, a whole population could be protected against smallpox, diphtheria, scarlet fever, were it but possible to apply and enforce our knowledge. Once the disease has gained a hold, however, our defensive weapons are but too often inadequate. Ignorance of the means of salvation, passive and active, resistance, on the part of the people, are the enemies who join forces with disease. Antivaccinationists beseige legislatures to make vaccination optional instead of compulsory; societies for the prevention of cruelty to animals strive to forbid animal experimentation, without which progress in the conquest of disease is impossible; Christian Scientists reject the aid of Medicine, and rely upon prayer; the use of the vaccines against diphtheria and scarlet fever is rejected or neglected. Added to these is our recognition of the fact that much as we have learned, there is still so much to learn, and that so frequently we are helpless in the face of established disease.

Few realize the humility and abasement of spirit that overtake the earnest physician who watches the inexorable approach of death towards his patient. He has done his best, but in the face of the result, how futile it seems! It is this humility which impels us to lengthen the period of preparation of candidates for the degree of Doctor of Medicine; to insist that the verdict of fitness rendered by the school from which a diploma was issued should be reviewed by a State Board of Medical Examiners; to demand a minimum standard of efficiency from every hospital for the sick; to institute campaigns for the education of the public in the methods of preventing disease; and to insist that no medical discovery which promises to be of value in the cure of disease shall be kept secret, or monopolized, for the benefit of its discoverer.

These lofty and altruistic ideals of the medical profession are our proud heritage from generations of our forbears. Ours the duty to maintain them.

LIBRARIAN'S REPORT FOR 1928.

The outstanding feature of the year's work in the library has been the new physical arrangement and additional personnel providing closer relationship with the Tulane Medical Library. Miss Marshall having been appointed general director of the two libraries, with offices in the Orleans Parish Medical Society, having assistance in each and a direct connection by means of a new stairway, facilitates the administration and utilization of two large collections of medical literature. Another advantage, from a financial standpoint, of this closer cooperation is the elimination of duplication in substriptions of books and magazines. The Tulane library is now making it a point to specialize in journals and texts dealing principally with the fundamental medical sciences placing our library in a better position to acquire literature relating to the clinical branches.

The new books added during 1928 totaled 682. They were received from:

Binding	215
Gift	253
N. O. Med. and Surg. Jour.	164
Exchange	17
Purchase	21
Subscription	12

A notation of new titles is made each month in the local journal.

The total number of books in the library is 13,790.

Gifts were received from 37 sources, including individuals, libraries and medical societies in different parts of the country.

Considerable new equipment has been added as follows:

A new reading room was built and shelved.

A new duplicate room was built and shelved.

The reading rooms were refurnished with 5 tables and 20 chairs.

There were added 2 five-section tiers of double-faced shelving, a new typewriter, desk and chair, 2 gas stoves, telephone extension, office for the assistant librarian.

Miss Marshall was sent to the Meeting of the Medical Library Association in New York, serving as a member of the Executive Committee and Chairman of the Membership Committee.

For the coming year she was reappointed as Chairman of the Membership Committee and a member of the Publication Committee.

While in New York she visited the following libraries:

New York Academy of Medicine.

Library of the County of Kings Medical Society (Brooklyn).

Rockefeller Institute of Medicine Library.

Library of Columbia University College of Physicians and Surgeons.

Respectfully submitted,

DANIEL N. SILVERMAN, M. D.,
Librarian.

LOUISIANA STATE MEDICAL SOCIETY NEWS

H. Theodore Simon, M. D., Associate Editor.

ST. LANDRY PARISH MEDICAL SOCIETY
OPELOUSAS, LOUISIANA.
—NOTICE—

At a special business meeting of the St. Landry Parish Medical Society held at Opelousas, Louisiana, on June 6, 1929, five resolutions concerning the relationship between the Parish Health Unit and the Parish Medical Society were adopted.

It was voted to send a copy of these resolutions to the following organizations: (1) Louisiana State Board of Health, (2) Louisiana State Medical Society, (3) All Parish and District Medical Societies in Louisiana.

Signed,

WILSON W. KNOWLTON, M. D.,
Secretary-Treasurer, St. Landry Parish
Medical Society.

The following resolutions were adopted by the St. Landry Parish Medical Society at a Special business meeting of that body on June 6, 1929.

Whereas, the physicians of St. Landry Parish desire to strengthen the ties of friendship and cooperation between the local Health Unit and the physicians for the benefit of the people of St. Landry Parish generally;

Be It Hereby Resolved, That:

(1) For the purpose of clarification, the term "indigent" as herein after used shall apply to those individuals who are unable to care for themselves financially and who are therefore of necessity treated free of charge by their respective family physicians.

(2) Anti-rabic vaccine and other biologicals (except diphtheria toxin-antitoxin mixture, smallpox vaccine, and typhoid vaccine) should be furnished free of charge to indigents only and then only upon direct request from their respective family physicians.

(3) The best method for helping people to have their children's physical defects corrected before those defects have done too serious harm to the children is for the people themselves, heeding the examinations and reports of the local Health Unit, to take their children in person to their own family physicians for advice and assistance; in the case of indigents this work should be undertaken after a consultation involving the family physician, the director of the Health Unit, and the specialist concerned has been held.

(4) Biological products of any nature (including diphtheria toxin-antitoxin mixture, smallpox vaccine, and typhoid vaccine) should not be administered free of charge to everyone without regard to financial status except (a) in the case of school children, and (b) in the face of emergencies of epidemics; and furthermore in the case of school children a urinalysis should be done before the administration of antitoxin to children suspected of having Bright's Disease, heart disease, or pulmonary tuberculosis.

(5) The St. Landry Parish Medical Society extends its help and assistance to the local Health Unit chiefly toward the eradication of malaria, tuberculosis, hookworm, pellagra, beriberi, and other infectious diseases generally; and with this end in view each physician in St. Landry Parish shall take upon himself the responsibility of promptly reporting to the local Health Unit each and every case of any communicable disease encountered by him in his practice.

Resolution adopted by the St. Landry Parish Medical Society at the meeting of the Society, July 17, 1929.

Resolved, That the St. Landry Parish Medical Society reluctantly accepts the resignation of Dr. W. W. Knowlton as Secretary-Treasurer of this body, necessitated by his removal to a wider sphere of sanitary labor, in the State of Massachusetts, and in doing so this Society expresses its high appreciation of Dr. Knowlton, as a gentleman and medical sanitarian, ever since his advent in our midst and especially since his connection as Secretary-Treasurer of this body. It further expresses the hope that the same measure of success that has characterized his labors in this Parish, will continue in his new field of activity; as a further mark of appreciation, Dr. Knowlton be elected an Honorary Member of this Society; That this resolution be spread on the minutes and a copy sent to Dr. Knowlton and to the official Journal of the Louisiana State Medical Society.

UNITED STATES PUBLIC HEALTH SERVICE.

JUNE 19, 1929.

Surgeon W. C. Rucker. Directed to proceed from New Orleans, La. to Atlantic City, N. J. and return, for the purpose of attending the meeting of the Amreican Hospital Association, June 17-21.

A. A. Surgeon C. C. Applewhite. Directed to proceed from Jackson, Miss. to Greenwood, Miss. and return, to inspect and condemn unserviceable property at the Malaria Laboratory. June 14, 1929.

An institute for Tuberculous Workers will be conducted at Nashville, Tenn., September 10 through 24, 1929, under the auspices of Vanderbilt University, in co-operation with the National Tuberculosis Association, the Southern Conference on Tuberculosis, the Tennessee Tuberculosis Association, and the Tennessee State Department of Health.

This training course will be conducted by Philip P. Jacobs, Ph.D., Director, Publications and Extension Service of the National Tuberculosis Association. The committee on local arrangements and program includes James P. Kranz, Southern Conference on Tuberculosis, Dr. E. L. Bishop, Tennessee State Department of Health, Dr. W. S. Leathers, Vanderbilt University School of Medicine and S. L. Smith, Field Worker, of the Rosenwald Foundation.

The Institute has four main objectives: To assist workers already in executive positions in the tuberculosis field to assume positions of greater responsibility or to become more useful in their present positions; to prepare for executive positions those who have not had experience in the tuberculosis field; to give to volunteer workers a more comprehensive knowledge of the administrative problems involved in this work; to aid in the standardization of methods and programs of tuberculosis work.

Application for the Institute and further information can be secured from James P. Kranz of the Tennessee Tuberculosis Association, 405 Chamber of Commerce Building, Nashville, Tennessee.

YOUR FAMILY PHYSICIAN—Magazines of the day are replete with articles advising the public how best to invest their money. All very good. Even more pertinent is the security of health and life. You understand the purchase of stocks and bonds, but do you know how to buy yourself a doctor?

You have Dr. Jones because he belongs to your church. Dr. Smith is an examiner for your lodge. Dr. Brown is a good patron of your bank. Wonderful security? How much money would you lend him on the strength of it?

Yet you freely entrust to his custody the health and lives of yourself and family. "What fools we mortals be?"

Do you know aught of his education? Where he practiced before entering your community? Why he left? No, you don't know any of these things. You assume that he passed the State Board of Medical Examiners and has a license to practice medicine in your state. All right as far as it goes.

How then shall we select a family physician?

Choose first a man who is honorable, honest and conscientious. He will afford you greater protection than the law. Secondly: one of good habits. Thirdly: one of sound judgment. This is a wonderful asset to a physician.

Beware of the doctor who is not a member of his County Medical Society. It is true that many poor ones belong, but few good ones do not. Select, if possible, a man who is on the staff of a recognized hospital. The directors of a hospital are in a better position to judge of his qualifications. Regard with suspicion a doctor who objects to meeting others in consultation. His ignorance is probably worthy of concealment.

Consider twice the doctor who demands payment in advance. True, "The laborer is worthy of his hire," but a dollar is dearly earned that costs us the respect of others.

Everything considered, doctors are not very different from other commodities. The cheapest is not always the best buy; and those who charge most sometimes sell inflated values.

Would that we might recall the old type of family physician, he who radiates sympathy and kindness. Some doctors are so cold-blooded that they have to carry alcohol in their radiators to keep from freezing. We need more of the spirit of humanity and less of the spiritus frumenti.

With the best information available, the choice of a physician may, for many, prove something of a lottery; but if fortune does not favor you in the first draw, you can always call for a new deal.

Then go to him, on every birthday, for a health inventory. Ask him to help you keep well.—Jackson Daily News, Jackson, Miss., June 4, 1929.

MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

L. S. Lippincott, M. D., Associate Editor

Dr. H. A. Gamble President of the Mississippi State Medical Association, has announced the Chairmen of Sections and Committees for the coming year as follows:

Section on Medicine—Dr. G. Y. Gillespie, Greenwood.

Section on Surgery—Dr. H. R. Shands, Jackson.

Section on Hygiene and Public Health—Dr. Hardie R. Hays, Laurel.

Section on Eye, Ear, Nose and Throat—Dr. C. A. Williams, Gulfport.

Section on Radiology—Dr. C. C. Hightower, Hattiesburg.

Committee on Publication—Dr. T. M. Dye, Clarksdale,; Dr. R. W. Hall, Jackson; Dr. R. M. Donald, Moorhead.

Committee on Public Health and Legislation—Dr. Felix J. Underwood, Jackson.

Committee on Medical Education—Dr. J. S. Sanders, Leland; Dr. John Darrington, Yazoo City; Dr. R. J. Field, Centerville.

Committee to Attend State Teachers' Association—Dr. R. C. Smith, Drew; Dr. M. J. Few, Rolling Fork; Dr. W. A. Carpenter, Cleveland.

Committee on Scientific Work—Dr. T. M. Dye, Clarksdale; Dr. J. S. Sharp, Grenada; Dr. W. A. Dearman, Gulfport.

Committee on Hospitals—Dr W. H. Southerland, Booneville; Dr. C. T. Chamberlain, Natchez; Dr. S. H. Hairston, Meridian.

Committee on Necrology—Dr. A. G. Everett, Friar Point; Dr. L. J. Hightower, Itta Bena; Dr. Charles Murray, Ripley.

The following physicians were chosen by the Mississippi State Board of Health in session June 24, 25 and 26, 1929, to serve as County Health Officers for the period July 1, 1929, to June 30, 1931:

Adams County—Dr. E. D. Blackwelder, Natchez. Alcorn County—Dr. M. W. Robertson, Rienzi. Amite County—Dr. C. W. Stewart, Osyka. Attala County—Dr. J. W. Comfort, Kosciusko Benton County—Dr. Frank Ferrell, Ashland. Bolivar County—Dr. R. D. Dedwylder, Cleveland. Calhoun County—Dr. Eli Powell, Vardaman. Carroll County—Dr. J. P. T. Stephens, Vaiden. Chickasaw County—Dr. J. Rice Williams, Houston Choctaw County—Dr. W. D. Arnold, Ackerman. Claiborne County—Dr. W. N. Jenkins, Port Gibson. Clark County—Dr. D. S. Johnson, Quitman. Clay County—Dr. J. C. Ellis, West Point. Coahoma County—Dr. D. V. Galloway, Clarksdale. Copiah County—Dr. J. A. Milne, Hazlehurst. Covington County—Dr. G. T. Cranford, Seminary. DeSoto County—Dr. A. L. Emerson, Hernando; Forrest County—Dr. W. D. Beacham, Hattiesburg. Franklin County—Dr. J. C. McGehee, Bude. George County—Dr. R. F. Ratliff, Lucedale. Greene County—Dr. M. M. Magee, Avera. Grenada County—Dr. T. J. Brown, Grenada. Hancock County—Dr. C. M. Shipp, Bay St. Louis. Harrison County—Dr. D. J. Williams, Gulfport. Hinds County—Dr. W. E. Noblin, Jackson. Holmes County—Dr. T. P. Haney, Lexington; Humphreys County—Dr. Paul S. Carley, Belzoni. Issaquena County—Dr. A. K. Barrier, Rolling Fork. Itawamba County—Dr. N. W. Nanney, Fulton. Jackson County—Dr. R. G. Lander, Pascagoula. Jasper County—Dr. C. E. Burnham, Bay Springs. Jefferson County—Dr. W. H. H. Lewis, Fayette. Jeff Davis County—Dr. G. C. Terrell, Prentiss. Jones County—Dr. Hardie R. Hayes, Laurel. Kemper County—Dr. C. T. Bell, DeKalb. Lafayette County—Dr. E. S. Bramlette, Oxford. Lamar County—Dr. W. H. Cleveland, Purvis. Lauderdale County—Dr. J. T. Googe, Meridian; Lawrence County—Dr. B. S. Waller, Silver Creek. Leake County—Dr. I. A. Chadwick, Carthage. Lee County—Dr. C. St. C. Guild, Tupelo. Leflore County—Dr. C. P. Coogle, Greenwood. Lincoln County—Dr. W. R. May, Brookhaven. Lowndes County—Dr. J. W. Cox, Columbus. Madison County—Dr. R. W. Smith, Canton. Marion County—Dr. D. A. Ratliff, Columbia. Marshall County—Dr. Ira B. Seale, Holly Springs. Monroe County—Dr. Chas. H. Love, Aberdeen. Montgomery County—Dr. J. P. Synott, Winona. Newton County—Dr. W. G. Gill (to serve until successor is chosen), Newton. Neshoba County—Dr. W. J. Stribling, Philadelphia. Noxubee County—Dr. E. M. Murphy, Macon. Oktibbeha County—Dr. F. B. Long, Starkville Panola County—Dr. G. H. Wood, Batesville. Pearl River County—Dr. J. W. Shackelford, Poplarville. Perry County—Dr. B. T. Robinson, New Augusta. Pike County—Dr. W. S. Lampton, Magnolia. Pontotoc County—Dr. R. P. Donaldson, Pontotoc. Prentiss County—Dr. W. H. Anderson, Boonville. Quitman County—Dr. A. C. Covington, Marks. Rankin County—Dr. J. B. Ainsworth, Florence. Scott County—Dr. W. C. Anderson, Forest. Sharkey County—Dr. A. K. Barrier, Rolling Fork. Simp-

son County—Dr. R. E. Giles, Mendenhall. Smith County—Dr. J. O. Cargile (to serve until successor is chosen), Taylorsville. Stone County—Dr. S. C. Culpepper, Wiggins. Sunflower County—Dr. J. H. Janney, Indianola. Tallachatchie County—Dr. R. D. Byars, Cascilla. Tate County—Dr. J. S. Eason, Coldwater. Tippah County—Dr C. M. Murry, Ripley. Tishomingo County—Dr. J. W. Barkley, Iuka. Tunica County—Dr. W. H. Williams, Tunica. Union County—Dr. L. A. Barnett, New Albany Walthall County—Dr. B. L. Crawford, Tylertown. Warren County—Dr. F. Michael Smith, Vicksburg. Washington County—Dr. H. P. Rankin, Greenville. Wayne County—Dr. J. N. Mason, Clara. Webster County—Dr. W. H. Curry, Europa. Wilkinson County—Dr. C. E. Catchings, Woodville. Winston County—Dr E. L. Richardson, Louisville. Yalobusha County—Dr. R. J. Criss, Coffeeville. Yazoo County—Dr. H. L. McCalip, Yazoo City.

Dr. M. J. Few of Rolling Fork is in New York for special work.

Dr. L. E. Martin, Anguilla, has recently installed an infra-ray and radiolight lamp in his office.

The Sharkey and Issaquena Counties Tonsil and Adenoid Clinic opened July 1. This Clinic is held one day each week during the summer at the hospital of Dr. W. C. Pool, with Dr. A. K. Barrier, County Health Officer, and two County Health Nurses assisting.

At the July meeting of the Staff of the Vicksburg Sanitarium, the following special case reports were presented:

Partial Bile-Duct Obstruction, with Cardiac Symptoms—Dr. A. Street.

Stricture of the Ureter—Dr. J. A. K. Birchett, Jr.

Ileo-Colitis in a Child of Fourteen Months; Intra-peritoneal Blood Transfusion.

Selected radiographic studies were presented and discussed as follows: Arthritis of the Spine; Enlarged Thymus (three cases); Tuberculosis (two cases); Lung Abscess; Duodenal Ulcer (two cases).

Resolutions were adopted thanking and commending Dr. F. M. Smith, Director of the Warren County Health Department, for the very excellent course of instruction in Communicable Diseases and Public Health given to the nurses and technicians of the Sanitarium in conjunction with the nurses of other Vicksburg hospitals during the past year.

At the meeting of the Staff of the Vicksburg Hospital on June 6, the following interesting discussions of the work of the hospital were presented:

Dr. E. H. Jones:

Traumatic Injury of the Eye.

Acute Mastoiditis with Profound Toxemia, occurring in a young child.

An Individual Presenting a Marked Hypertension (systolic blood pressure 240, diastolic 175), with Infection of Tonsils and Tonsillectomy.

Dr. I. C. Knox:

A Case of Carcinoma of the Cervix, Showing the Effect of Radiation.

A very aged individual with Appendicitis and Diffuse Peritanitis, with recovery following Appendectomy and Drainage.

Dr. W. H. Parsons:

Benign Tumor of the Fibula with Attachment to the Tibia.

A case of Carcinoma of the Pylorus with Associated Acute Cholecystitis.

Dr. G. P. Sanderson:

X-Ray Studies of Vesical Calculus; Hypertrophic congenital pyloric stenosis; Lobar pneumonia; Pulmonary tuberculosis; Periostitis of the humerus; Mastoiditis, with radical operation.

Following the meeting, lunch was served.

SOME HIGH LIGHTS IN MISSISSIPPI MEDICAL HISTORY.*

According to Dr. J. M. Taylor, President of the Mississippi State Medical Association in 1873-4, and published in the 1893 *Transactions*, the first meeting of the Association was held in Jackson, December 15, 1856. It was organized by electing Dr. W. Y. Gadberry, of Benton, president, and Dr. M. C. Craft, of Jackson, recording secretary. Present at this meeting besides Drs. Gadberry and Craft, were Drs. S. C. Farrar and A. B. Cabaniss, of Jackson; H. Posey, of Brandon, and C. B. Galloway, of Kosciusko. There were perhaps others whose names do not appear in the proceedings.

A constitution and by-laws were adopted and delegates appointed to the American Medical Association. On motion of Dr. Craft, those physicians who signed the call for this convention were declared permanent members on compliance with the constitution and by-laws.

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*Facts gathered from a History of the Mississippi State Medical Association, prepared by Dr. E. F. Howard, of Vicksburg, with the assistance of Drs. J. C. Hall, of Anguilla, and H. L. Sutherland, of Rosedale, and published by order of the Association in 1910.

The Association adjourned to meet on the second Monday in November, 1857, but there was no other meeting until April 20, 1869, when pursuant to a call made by the Vicksburg Medical Society, physicians from various parts of the State assembled in Jackson for the purpose of again forming a State Medical Association.

A new, three-story brick building with basement is being erected as an addition to the Vicksburg Infirmary. When completed, the institution will be equipped to care for 100 patients, according to the most approved modern standards. Dr. B. B. Martin is superintendent and owner.

On June 6 the staff of the new Vicksburg Hospital was organized as follows: President, Dr. I. C. Knox; Vice-President, Dr. G. P. Sanderson; Secretary, Dr. W. H. Parsons; members, Drs. J. S. Ewing, E. H. Jones, E. F. Howard, M. H. Bell, and C. J. Edwards, all of Vicksburg.

It was voted to hold regular staff meetings at 7:30 P. M. on the first Tuesday of each month.

Several physicians have located in Jackson during the past few months. They include Dr. W. L. Hughes, Jackson Infirmary, Eye, Ear, Nose and Throat; Dr. T. J. Crofford, Lampton Building, Internal Medicine and Diagnosis; Dr. T. A. Wilde, Century Building, Eye and Plastic Surgery of the Face; Dr. T. E. Wilson, Lamar Life Building, General Practice and Laboratory; Dr. O. Simmons, Century Building, General Practice.

The many friends of Dr. F. J. Underwood, Executive Officer of the Mississippi State Board of Health, will regret to learn that he is confined to his home with undulant fever.

The City of Jackson is mourning the death of Dr. William S. Hamilton, and Dr. E. L. Posey, two of its best beloved physicians and citizens. The profession nowhere can boast of two finer young men or more capable physicians.

A number of improvements have recently been made at the Matty Hersee Hospital, Meridian, at a cost of $30,000. Included are new quarters for the nurses, a recreation hall for nurses, new furniture and general hospital equipment.

Dr. F. J. Martin, Tulane University, has recently been appointed house physician to take the place of Dr. G. L. Arrington, resigned.

Dr. Leslie V. Rush has resigned as a member of the visiting staff in orthopedic surgery.

Drs. C. J. Lewis and G. L. Arrington have been appointed members of the visiting staff.

Dr. W. W. Hall, Tulane University, is now an interne.

About sixty doctors attended the meeting of the Central Medical Society on July 9. Dr. J. W. Barksdale presented an interesting paper on "Surgical Condition of the Biliary Tract," and Dr. R. W. Hall a valuable paper on "Epidermophytosis." Dr. H. A. Gamble, president of the Mississippi State Medical Association, who was to have given an address at this meeting, was prevented from attending. After a short business session, the meeting was closed with a banquet. This meeting of the Society, which was held at the University Club, will be the last until September.

Dr. H. R. Shands, of Jackson, is spending the summer at Colorado Springs. Dr. Frank Hagaman, his associate, will carry on while Dr. Shands is away.

The June meeting of the Central Medical Society was held at the Jackson Chamber of Commerce on June 18. Following a clinic by members of the society, the following program was presented:

Plastic Surgery of the Face (illustrated by lantern slides), Dr. T. A. Wilde.

The State Insane Hospital, Dr. C. D. Mitchell.

The Toxic Psychoses, with Report of Cases, Dr. R. B. Zeller.

Psychoneurosis Following Removal of the Ovaries, with Report of Cases, Dr. E. J. Banks.

The Importance of the Early Diagnosis and Treatment of Pellagra, Dr. A. L. Monroe.

The regularly quarterly meeting of the Northeast Mississippi Medical Society was held at Walker's Lake, West Point, on the afternoon of June 18. A barbecue was furnished by the West Point physicians, after which the scientific program was carried out as follows:

Meeting called to order, President J. R. Hill.

Invocation, Rev. L. E. Sellers.

Address of welcome, Hon. T. J. Tubb.

Response, Dr. G. S. Bryan.

Report of Two Interesting Cases of Tubal Pregnancy, Dr. F. B. Long, Starkville. Discussion opened by Drs. Ivy and Sutherland.

Cesarian Section, Dr. V. D. Philpot, Houston. Discussion opened by Drs. Fite and R. E. Priest.

Chronic Pyelonephritis, Dr. O. S. McCown, Memphis, Tenn. Discussion opened by Drs. Deans and R. M. Boyd.

Report of Interesting Cases, Dr. W. W. Bryan, Hamilton. Discussion opened by Dr. M. Q. Ewing.

Co-operation Between the General Practitioner and the Health Officer, Dr. C. H. Love, Aberdeen. Discussion opened by Drs. G. S. Bryan and Guild.

Biloxi dedicated a new hospital on July 3. Speakers at the impressive ceremonies were Mayor John J. Kennedy, Louis Staehling, president of the Biloxi Hospital Board; James C. Carrigan, potentate of Alchymia Shrine of Memphis; L. W. Guice, city attorney, and Dr. G. F. Carroll, president of the Chamber of Commerce. Rev. E. A. DeMille said the invocation. The drill team of Alchymia Temple gave an exhibition and the Alchymia Shrine band furnished music for the occasion. The hospital has 60 beds and it is intended to make it a Grade A institution.

Dr. T. H. D. Griffitts, until recently connected with the Survey of Salt Marsh Areas under the United States Public Health Service, with headquarters at Biloxi, has been transferred. Dr. Griffitts made many friends along the Gulf Coast who regret his leaving.

Dr. F. Michael Smith, Director of the Warren County Health Department, has during the past year given a comprehensive course in Communicable Diseases and Public Health to the pupil nurses and technicians of the hospitals of Vicksburg. The course has consisted of one lecture a week with frequent quizzes and examinations. At this time when preventive medicine is so much to the fore, it is felt that this work is an advance in the training of nurses and technicians, and could well be carried out by health officers in every county of the State where there are nurses' training schools.

Announcements have been received of the approaching marriage of Dr. Preston Street Herring and Miss Helen Greenoe, both of Vicksburg. Miss Greenoe is the daughter of Rev. and Mrs. John C. Greenoe. Dr. Herring is house officer at the Vicksburg Infirmary. The marriage will take place August 1 at the First Baptist Church, Vicksburg, Rev. J. C. Greenoe officiating.

Dr. and Mrs. Philip Beekman, of Natchez, are spending the summer at Atlantic City.

Dr. E. E. Benoist, of Natchez, has been elected secretary of the Lake St. John Outboard Motor Boat Association.

Dr. Carl Day, of Yazoo City, has recently returned from New York where he spent six weeks in x-ray work.

Dr. J. T. Rainer, of Yazoo City, recently visited the Mayo Clinic at Rochester, Minn.

Dr. Gilruth Darrington, of Yazoo City, has been in New Orleans for special study.

Dr. J. D. Roberts, of Yazoo City, who was graduated from Tulane University this year, has returned to New Orleans for a year at the Charity Hospital.

Dr. George M. Street, of Vicksburg, attended the annual meeting of the American Medical Association at Portland, Oregon. He was accompanied by his wife and two children.

Dr. W. A. McMahon, and family, of Union, enjoyed a vacation during the month of July in Texas.

The last bi-monthly meeting of the East Mississippi Medical Society was held at the Elks Club, Meridian, on the afternoon of June 20th. The program was as follows:

Artificial Joint of Forearm, with Discussion of Compound Fractures (Clinic), Dr. S. A. Majure, Hickory.

Important Points in the Early Diagnosis of Exophthalmic Goitre, Dr. W. C. Chaney, Memphis, Tenn.

Some Points on Diagnosis and Treatment of Hear Disease, Dr. J. M. Bamber, New Orleans, La.

Intravenous Use of Magnesium Sulphate in Eclampsia, Dr. W. R. Holliday, Meridian.

Tularemia, Dr. J. L. Parkes, Union.

The scientific program was followed by a banquet at the Great Southern Hotel.

The East Mississippi Medical Society, which is composed of the physicians of Newton, Neshoba, Winston and Lauderdale counties, has as its president Dr. T. E. Jarvis, of Newton, and as its secretary, Dr. J. E. Anderson, of Louisville.

It is with much regret that announcement is made of the death of Dr. Robert McLain Hand at his home in Shubuta on June 11. Dr. Hand, a graduate of Louisville Medical College in the Class of 1874 had practiced medicine for 53 years. He will be much missed by his many friends and colleagues.

The following letter from Dr. I. W. Cooper, of Meridian, Treasurer of the Mississippi State Medical Association, written to the associate editor in reply to a request for news, gives numerous interesting facts about the physicians and medical happenings in eastern Mississippi. It is, however, a source of regret that Dr. Cooper takes such a pessimistic view of the future.

"Yours of yesterday at hand and in reply will say that I know another month has gone and both of us are one month nearer the grave, and I certainly hope you will be successful in making

Mississippi News an outstanding feature of the Journal.

"For your information:

"Dr. Leslie V. Rush has just returned from New York where he spent about a month trying to learn something about orthopedics.

"Dr. S. H. Hairston visited the Northeast Mississippi Medical Society at West Point.

"Dr. Franklin Gale Riley has just returned from a four weeks' tour of the northwest and is very much improved in health and spirit.

"Dr. George W. Bounds has returned from a two weeks' vacation spent in Tennessee.

"Dr. Leonard Hart left the first of July for an extended vacation of about two months.

"A handsome son has just been born to Dr. and Mrs. W. R. Holliday of this city, and I might add that this is the only birth in the families of the doctors in this city which has occurred in a long time. Most of the doctors are now going down the shady side of the street, and about all they can do is nurse and play with their grandchildren.

"If I can think of anything else between now and July 10th, I will write you, but I want to assure you of one thing—I don't think I can notify you of any more births. The next meeting of our Four County Society will be held at Philadelphia, August 15."

Dr. S. J. Gaddy, Eye, Ear, Nose and Throat; Dr. Earl J. Polk, Dentist; Dr. R. E. Schwartz, Heart, Lung and Stomach; and Dr. P. E. Smith, Gynecology and Surgery, all of Hattiesburg, have organized a clinic and are now settled in their new building on Hardy street.

Dr. C. C. Hightower, of Hattiesburg, furnishes the following interesting items:

"The South Mississippi Medical Society is one of the best in the State, covering fourteen counties in South Mississippi. We have a membership of about 125 with an average attendance of about 40. We meet quarterly, alternating meetings between Hattiesburg and Laurel, the two most prosperous cities in South Mississippi. The Society was organized about ten years ago and has failed to hold its regular meeting only one time. The meetings are held in the afternoon and evening, with a dinner served between the two sessions.

"Dr. J. P. Culpepper, Jr., of Hattiesburg, took on a regular boss, Miss Mildred Fairley, July 10.

"There is a great race on between Dr. Joe Green, of Richton, and Dr. H. L. McKinnon, of Hattiesburg, in story telling. Joe has a little edge on Dr. McKinnon in story telling, but Dr. Kinnon is leading his otherwise.

"Dr. C. C. Buchanan, of Hattiesburg, is anxious to attend the next year's meeting of the State Medical Association. He wants to be captain of the ship again.

"The Laurel doctors have been outclassed by the Hattiesburg doctors in attendance records during the past few meetings. It seems that they have conceded the honors and have almost quit trying."

Dr. Felix J. Underwood, Executive Officer of the Mississippi State Board of Health, has announced:

The following men who took medical examinations on four years' work, at the annual meeting of the examining board at Jackson on June 25 and 26, were granted licenses to practice medicine in Mississippi by the State Board of Health:

Drs. Thomas E. Wilson, James L. Hasic, Paul B. Brumby, Jewel D. Turner, Clyde R. Bennett, Jack Lazarus, Irvin B. Trapp, Alfred G. Neill, Davidson B. Baugh.

The following men who took examinations on the last two years' medical work, having successfully passed examinations on the first two years' work in 1927, were granted licenses to practice medicine in Mississippi by the Board at its final meeting, June 26:

Drs. George Evans Riley, James W. Lipscomb, Jr., Joseph D. Roberts, Jr., Tempel M. Moore, James P. Ward, William E. Anderson, Henry B. Goodman, Harvey F. Garrison, Jr., Thomas B. Butler, George H. Butler, Walter M. Coursey, Farris James Martin, Paul Jackson, James D. Biles, James A. McCallum, Stirling S. McNair, Marion B. Ware, Nathan B. Lewis.

The following men were granted license to practice medicine by reciprocity with the States indicated:

Drs. Will Wright Strange (Tennessee), Oma Simmons (Tennessee), Boyd C. Barentine (South Carolina), Coleman C. Burns (Arkansas), T. H. D. Griffitts (Tennessee), Preston S. Herring (Louisiana), Johnny Rufus Johnson (Tennessee), Robert T. McLaurin (Virginia), Lawrence W. Long (Tennessee), George P. Sims (Nebraska), Samuel W. Colquitt (Arkansas), James J. Drace (Missouri), James Cary Pegues (Georgia), Lawrence F. Brooks (col.) (Missouri), Jonathan H. Rucker (col.) (Tennessee).

Two osteopaths came before the Board for examinations in anatomy, physiology, and hygiene, the three subjects the law requires that they pass before practicing osteopathy. Both applicants were successful. They were Drs. William G. Waters, Blue Springs, and Allison B. White, Kansas City, Mo.

The following passed examinations on the first two years' medical work:

Jewell R. Wilson, Stanley A. Hill, James R. Brown, Eugene A. Bush, F. J. Wedell, Jr., Boyd C. Edwards, Tandy C. Rice, Glenn T. Gallaspy, Robert E. Shands, James E. Wilson, John H. Arrington, Jr., William R. McGehee, Wiley D. Lewis, Loys W. Willey, James G. Thompson, William E. Akin, Theodore H. Rayburn, Cecil P. Herrington, Walter E. Johnston, William Earl Hutto, Frank A. Latham, George L. Biles, John E. Tate, William Thomas Harper; Ira P. Burline, Jr., Charles F. Henley.

Dr. Underwood made the following statement in regard to this year's meeting of the Board:

"Examinations of applicants for the practice of medicine and osteopathy are conducted during the month of June of each year. As a whole, the group which came for examination this year was the best group that has appeared before the Board of Health for examination.

"The medical schools of the country are making definite improvement in their methods from year to year and it is a source of great satisfaction that within very recent years at least some attention is being paid to the teaching of preventive medicine. Two or three medical schools are doing outstanding work in this field at the present time Vanderbilt University Medical School is a notable example. Tulane and the University of Tennessee are also doing well. The University of Virginia is making rapid strides in teaching preventive medicine.

"Nothing has been sacrificed by these great schools in the teaching of curative medicine and surgery, but the students are given the advantage of a good course in preventive medicine which is very essential for successful, well-rounded practice in any community at the present time. In the future, every physician will be called upon to do an increasing amount of preventive medicine as a part of his daily routine due to the educational program of the Health Departments of the various States and to the splendid efforts of the United States Public Health Service and the Rockefeller Foundation."

At the meeting of the Issaquena-Sharkey-Warren Counties Medical Society held at the Y. M. C. A., Vicksburg, on July 9, the following scientific papers were presented:

Acute Sinusitis, Dr. E. F. Howard. Discussed by Drs. A. K. Barrier, S. W. Johnston, and A. Street.

Some Interesting Bone Tumors, Dr. A. Street. Discussed by Dr. E. F. Howard.

In preparation for the annual meeting of the Mississippi State Medical Association to be held in Vicksburg in 1930, President W. C. Pool appointed the following committees:

General Chairman, Dr. S. W. Johnston, Vicksburg.

Clinics—Drs. L. J. Clark, Vicksburg; W. H. Parsons, Vicksburg; P. S. Herring, Vicksburg; V.Bonelli, Vicksburg; T. W. Huey, Grace.

Commercial Exhibit—Drs. S. Myers, Vicksburg; D. A. Pettit, Vicksbrug; H. W. Weimar, Vicksburg.

Scientific Exhibits—Drs. E. F. Howard, Vicksburg; F. M. Smith, Vicksburg; M. J. Few, Rolling Fork; L. S. Lippincott, Vicksburg.

Convention Halls—Drs. G. P. Sanderson, Vicksburg; M. H. Bell, Vicksburg; J. B. Benton, Valley Park; W. H. Cooper, Catchings.

Hotels and Rooms—J. A. K. Birchett, Vicksburg; H. S. Goodman, Cary; W. C. Seale, Catchings.

Registration—Dr. J. A. K. Birchett, Jr., Vicksburg; C. J. Edwards, Vicksburg; J. V. May, Port Gibson.

Reception and Welcome—Drs. H. H. Johnston, Vicksburg; W. M. Eggleston, Vicksburg; J. S. Ewing, Vicksburg; H. H. Haralson, Vicksburg; L. E. Martin, Anguilla; B. T. Orendorf, Rolling Fork; D. P. Street, Vicksburg; A. K. Barrier, Rolling Fork.

Finance—Drs. I. C. Knox, Vicksburg; B. B. Martin, Vicksburg; A. Street, Vicksburg; W. G. Kiger, Eagle Bend; W. C. Pool, Cary; W. H. Scudder, Mayersville.

Entertainment—Drs. E. H. Jones, Vicksburg; G. M. Street, Vicksburg; G. W. Gaines, Tallulah; E. B. Stribling, Rolling Fork; C. S. Hyland, Yokena.

The DeSoto County Medical Society held its regular meeting Monday, July 8. The topic under general discussion was pellagra.

Dr. Charles Whitley Emerson was enrolled as a member of the Society. Dr. Emerson is now located in his home town, Hernando, and is associated with his father, Dr. Angus L. Emerson. The young doctor is a 1926 graduate of the University of Tennessee and has served two years as an interne in the Baptist Memorial Hospital of Memphis, Tennessee.

Dr. Alex J. Weissinger, of Hernando, who has been ill for a month, has resumed his practice.

The program of the DeSoto County Medical Society for its September meeting will be devoted in part to

"Obstetrics in 1869"—Dr. W. S. Weissinger.

"Obstertics in 1929"—Dr. T. W. Emerson.

The DeSoto County Medical Society now has a membership of fourteen. Dr. J. M. Wright of Hernando is President and Dr. L. L. Minor of Memphis is Secretary.

BOOK REVIEWS

Animal Parasitology: With Special Reference to Man and Domestic Animals: Robert Hegner, Francis M. Root and Donald L. Augustine. New York. Century Co. pp. 731.

This second number in The Century Biological Series is a university textbook on parasitology, written by men well qualified to present the subject. In addition to a General Introduction on parasitism in animals (pp. 3-24) by the senior author there are three sections, unfortunately divided into water-tight compartments.

The first section, that of Protozoology (pp. 25-185) by Professor Hegner is a masterly presentation of this important division of the subject. This section is well written, has a good balance and contains all of the information necessary for an academic knowledge of the protozoan parasites of man and laboratory mammals. It is adequately illustrated although some of the figures are too black for a pleasing appearance. The bibliography on this section is excellent.

The section on Helminthology (pp. 189-460) is contributed by Professor Augustine. It contains information dealing with the helminth fauna of man and domestic animals. The classification is that which has been in vogue for the past quarter of a century and many of the illustrations are stereotyped and should have been supplanted by new ones. While most of the important species have received adequate treatment, the blood-flukes (schistosomes) have received too brief consideration, in spite of the fact that they constitute one of the four or five groups really causing serious disease in man. The chapter on hookworms and related forms is perhaps the best presentation in this section.

The section on Medical Entomology (pp.. 463-640) by Professor Root constitutes a real contribution to the subject. Not only is it authoritative and up-to-date, but it is the first scholarly presentation of medical entomology in the English language since the publication of Colonel Alcock's "Entomology for Medical Officers". This section is clear, concise, and well-developed. Without exception the illustrations are excellent. Most of them are original. Necessarily there are several technical keys, but there are also chapters dealing with such public health subjects as "Malaria and Mosquito Surveys", "Malaria Control", "Culicine Mosquitoes and Human Disease", "Dbmestic Flies as Disease Carriers and their Control", and "Notes on Collecting and Preserving Insects of Medical Interest". This section alone is worth the price of the book.

The book is well printed although not substantially bound.

ERNEST CARROLL FAUST, Ph.D.

Anatomical Studies on the Motion of the Heart and Blood: By William Harvey, M. D.; English translation by Chauncey D. Leake. Springfield, Ill. Charles C. Thomas. 1928. pp. 154.

The 16th century was concerned primarily with the structure of organs and was a period of turmoil in medicine from which the anatomy of Vesalius emerged. The main contribution of the 17th century was Harvey's demonstration of the manner in which the heart maintains the nutrition of the body. The facts given by Harvey have not had to undergo any appreciable modification during the three centuries which have elapsed since the publication of his work in 1628 and they have furnished the groundwork or starting point for subsequent researches.

Harvey's De Motu Cordis has been described by Yandell Henderson as "the most delightfully readable of scientific works". "Every student of the biological and medical sciences should own and read it." This volume is one of the tributes of the Harvey tercentenary, beautiful as well as practical. It is in two parts. Part I is a facsimile of the original Latin edition, Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus. Part II is the Leake translation. This is the third attempt to render Harvey's classic into English idiom. The first was apparently an anomymous effort, prefaced by a Zachariah Wood of Rotterdam, and printed by Francis Leach for Richard Lowndes of London, in 1653. This actavo was reprinted in 1673. The second was the well known translation made for the Sydenham Society by Robert Willis and published in 1847. Reprinted in London in 1889, in Canterbury in 1894, and in Everyman's Library in 1907, this has become the standard English verson. Although an excellent translation, its stilted and involved phraseology makes it rather difficult reading for those more accustomed to present diction. Professor Leake's experience with medical students and physicians makes him feel confident that they would welcome the chance to study the works of the great contributors to their profession were these to be offered to them in an attractive and easily readible form. This led to the suggestion that in the bringing out of a tercentennial edition of Harvey's book a new translation in the language and spirit of our times be attempted. According to the translator, "In his more scientific passages, Harvey is remarkably terse and snappy, in the current style. In his philosophical discussions he becomes vague and his sentences grow beyond control, but whose do not?" The translation is admittedly free, in the deliberate attempt to present Harvey's thought in the current physiological

manner. Every one will find the translator's analyses of the argument, of the differences in Harvey's style as he grew older, of the contents of the various chapters, and of Harvey's occasional lack of logic and lapse into the use of the traditional authority of Galen as evidence, very helpful and illuminating.

Harvey was amng the first to use the practical methods of science as we do now: observation, hypothesis, deduction and experiment. In order to bring out the significance of Harvey's work in regard to our modern knowledge of cardiac function, and to relate it to the slow development of this knowledge, footnotes have been added to the translation. They are appropriate and will appeal to all. A chronology of Harvey's life closes the work.

The work is beautifully printed and attractively bound. Translator and publisher deserve the highest praise for offering in a dignified and inexpensive way an opportunity to become acquainted intellectually with one of the greatest contributors to medical science.

HENRY LAURENS, Ph.D.

Blood and Urine Chemistry: By R. B. H. Gradwohl, M. D., and Ida E. Gradwohl, A. B. St. Louis, Mo. C. V. Mosby Company, 1928. pp. 542.

This book contains a great amount of information for one interested in the examination of blood and urine. For those who desire to equip a laboratory there is a description of the facilities required and a statement of the apparatus necessary. A variety of colorimeters are described and their use discussed. The significance of Ph and the nature of buffer action are explained. Methods for the determination or identification of the more commonly studied normal or abnormal constituents of blood and urine are presented, alternate procedures being given in a number of instances. A chapter is devoted to the microscopic examination of urinary sediments and another to the bacteriologic examination of urine. A large portion of the book is concerned with the interpretation of blood chemical findings with particular regard to blood sugar, acidosis, gout and nephritis. The final section takes up the theory, clinical application and methods of determination of basal metabolism. References to the original literature are liberally employed throughout the text.

R. C. CORLEY, Ph.D.

Transactions of the Seventh Congress, Far Eastern Association of Tropical Medicine, held in British India December, 1927. Edited by Lieut.-Col. J. Cunningham. Calcutta. Thacker's Press and Directories, Ltd., Vol. I, 1929. pp. 865.

This volume (the first one of three in the series of this Congress) consists of 865 pages of the papers and discussions of the sections of clinical medicine, pathology, hygiene and state medicine of this important congress on medicine in the tropics. The volume is prefaced by a list of the patrons and officers of the congress, the opening addresses of welcome and the presidential salutatory. There is then presented a splendid compilation of essays in the following order: medicine and dermatology (pp. 1-137), pathology (pp. 138-194), surgery (pp. 195-266), ophthalmology ((pp. 267-317), gynecology and diseases of pregnancy (pp. 318-388), mental hygiene and psychiatry (pp. 389-428), radiology (pp. 429-446), dentistry (pp. 447-462), state medicine: general and special hygiene (pp. 463-816), and maternity and child welfare (pp. 817-862). It must be stated that in this series of valuable papers there is no single one which stands out as a preeminently important contribution to medical literaure. However, two fact have impressed the reviewer (who, as a member of the Association, is familiar with the progress of medicine in the Far East). The first is the very large proportion of papers which are the contributions of native physicians of British India, to be exact, thirty per cent of the total. The second striking fact is the progress made in public health and sanitation in India, as demonstrated both by the type of papers presented and by the statistical information contained in them. One is struck by the lack of emphasis on beriberi, which has been the most important public health problem presented in the previous congresses of the Association, and by the multiplicity of topics on public health, including quarantine, anti-plague measures, anti-cholera vaccination, epidemiology of cerebro-spinal meningitis, sterilization of drinking water, sewage disposal, tuberculosis, school hygiene, and health campaigns among the lower classes. As a clearing house for all of these activities the congress needs no apologia.

The volume is well edited and beautifully printed, with clean-cut half-tone illustrations and a few excellent colored plates.

ERNEST CARROLL FAUST, Ph.D.

The Facts of Modern Medicine: A Simplified Statement of Established Knowledge on Medical Subjects, with Reference also to Certain Current Misconceptions: By Francis W. Palfrey, M. D. New York and London, D. Appleton & Company, 1929. pp. 490.

An excellent book directed to an excellent purpose and worthy of heartiest commendation. The question, however, is how to get it into the hands of those for whom it is intended and who should read it. "The purpose of this book is to promote among the laity a better understanding of medicine. It is a constant source of astonishment to physicians to find that patients, otherwise well informed, understand practically nothing about health and disease." It is indeed a curious commentary upon modern education and modern civilization that the average well educated person knows more about the intricacies of the construction and function of the automobile and radio than he does about the fundamental facts of his own body. This gives rise not only to neglect of the individual's body and of the public health but also to the encouragement of all sorts of crazy cults. If by the reading of such books as these and by popular public lectures the knowledge of the essentials of health and disease could be spread, a great step forward would be taken. The difficulty lies in getting the average layman to read such books or attend such lectures. Half-hearted attempts have been made in this direction from time to time and half-baked elementary courses in human physiology have been offered to high school students.

The present book is most readable and is couched in dignity though proper and thoroughly understandable terms. The first part leaves little room for criticism. The second part is devoted to individual diseases and suggests again another of the difficulties in this propaganda, namely the fact that a little knowledge is a dangerous thing. As the author points out in his introduction, there have been books published "purporting to be 'family medical advisers'. . . . Most, if not all, of them are dangerous, not only by reason of the general attitude which they encourage, but because of the specific advice contained in them is frequently erroneous." Both of these dangers, of course, the author has avoided.

A second purpose of the book is interesting It is suggested that "if a medical student at the beginning of his career were given a preliminary view of the whole subject, drawn in broad outline but with all of its parts in true perspective, many of his difficulties and much of his blind floundering would be avoided. This book gives the student a bird's eye view of the territory he is to cover and he can then begin to appreciate the significance of the early fundamental courses and the practical bearing of the preliminary facts which must be drilled into him. It has been suggested from time to time that a few lectures be given in the first or second year of the medical curriculum which would serve this purpose and give the proper correlation between the pre-clinical and clinical courses. Whether these lectures be given or not, Dr. Palfrey's book can be recommended unreservedly to the medical Freshman as a reliable and stimulating guide and as furnishing an adequate plan of the structure which he is to rear.

I. I. LEMANN, M. D.

William Harvey: By Archibald Malloch, M. D., M. R. C. P. (Lond.) New York, Paul B. Hoeber, 1929. pp. 97.

This little volume is one of a series in which are included such names as Sydenham, Kussmaul, and Laennec. Harvey's life and habits are briefly and well described, and the manner in which his theory of the circulation was evolved is outlined in a most interesting manner. Two hours enjoyably and well spent.

M. M. WINTROBE, M. D.

PUBLICATIONS RECEIVED

A. Appleton and Company, New York and London: Bodily Changes in Pain, Hunger Fear and Rage, by Walter B. Cannon, M. D., S. D., LL.D.

P. Blakiston's Son & Co., Philadelphia: Gynecology, by Lynn Lyle Fulkerson, A. B., M. D., F. A. C. S. Hygiene and Public Health, by Parks and Kenwood, revised by Henry R. Kenwood, C. M. G., M. B. and Harold Kerr, O. B. E.

F. A. Davis Company, Philadelphia: Conquest of Cancer by Radium and other Methods, by Daniel Thomas Quigley, M. D., F. A. C. S.

Paul B. Hoeber, Inc., New York: History of Hemostasis, by Samuel Clark Harvey, M. D. Otosclerosis, a resume of the literature to July, 1928, compiled under the direction of the Committee on Otosclerosis, American Otological Society. Introduction to the Study of Physic, by William Heberden.

Lea and Febiger, Philadelphia: Human Helminthology, by Ernest Carroll Faust, Ph.D.

The Macmillan Co., New York: Clinical Aspects of Venous Pressure, by J. A. E. Eyster, B.Sc., M. D.

C. V. Mosby Company, St. Louis: Principles and practice of Electrocardiography, by Carl J. Wiggers, M. D. Clinical Laboratory Methods. 3d. ed., by Russell Landram Haden, M. A., M. D. Osteomyelitis and Compound Fractures, by H. Winnett Orr, M. D. F. A. C. S.

W. B. Saunders Company, Philadelphia and London: Collected Papers of the Mayo Clinic and Mayo Foundation, ed. by Mrs. M. H. Mellish.